The School Arts Magazine

AN ILLUSTRATED PUBLICATION FOR THOSE
INTERESTED IN ART AND INDUSTRIAL WORK

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CONTENTS

A MUNICIPAL INDUSTRIAL ART SCHOOL FOR YOUR CITY . . . . . *H. M. Kurtzworth* 377

THE ORGANIZATION AND ADMINISTRATION OF ART AND INDUSTRIAL ARTS IN ELEMENTARY GRADES . . . . . *Leon Loyal Winslow* 387

AN ART AWAKENING . . . . . *D. Cartmel* 401

THE INDUSTRIAL IMPORTANCE OF ART . *Louise D. Tessin* 409

AN INTERESTING AND WORTH WHILE PROBLEM IN INDUSTRIAL ART . . . *Richard Ernesti* 412

EDITORIAL VIEWPOINT 416

TO THE POINT 422

GOOD IDEAS . . . . . *From Everywhere* 424

REFERENCE MATERIAL FOR THE ALPHABETICON
TWENTY-THREE PLATES 376-436

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Workmanship when . . . separated by too wide a gulf from fresh thought- that is, from design- inevitably decays, and on the other hand, ornamentation divorced from workmanship is necessarily unreal. and . . quickly falls into affectation. Proper ornamentation may be defined as a language . . addressed to the eye. it . is a pleasant thought expressed in the speech of the tool. . .

W. R. LETHABY

THE SCHOOL ARTS MAGAZINE

VOL. XX. No. 7 MARCH, 1921

A Municipal Industrial Art School for Your City

H. M. KURTZWORTH

EITHER America uses the valuable talents of her people to develop the advantages which nature so bountifully supplies her or both are lost through neglect.

Talent is like rich soil which bears no crops unless it is recognized, tilled, planted and cultivated.

Too much of our precious creative talent bears no crop for the individual, the city or the state, because its value has not been appreciated. Schools are seldom found which inspire and apply it. The individual has not known how talent could be used and manufacturers and merchants have seen little relationship between it and national wealth, in making rough materials furnish useful and attractive objects for every day use.

As a nation of amateurs, America holds all honors. We must begin to train ourselves as experts or lose the world's industrial respect. Our politics, our economics, our education, all suffer because of a lack of foresight and continuity. In politics, almost anyone who desires may be elected to an office regardless of his fitness, and as soon as he does become fit through experience he is replaced by another amateur to continue the reign of near-progress. Similarly, the economic situation is too often controlled by those who in remedial ability at least, are but experimenters, the object apparently being not to give better goods at the same or a less cost, but to produce cheaper goods at a greater cost, while the less amateur European profits by our ignorance or inexperience as we may choose to call it. Our amateurism shows itself in our education in that it gives future citizens a good grounding in the generalities and then turns them loose to solve the problems of the real world as best an amateur may, with the result that AMERICA HAS DONE PRACTICALLY NOTHING TO USE THE ARTISTIC TALENT OF HER CITIZENS TO DEVELOP HER NATURAL RESOURCES. It is gratifying, however, to know that we are awakening to a realization of our predicament and in order that we may not lose our heritage we have put into operation the Smith-Hughes Bill, which, in spending $4,329,000.00 for vocational education during 1921-22, will to some degree transform our amateur citizens into expert workers.

Unfortunately, no means is provided in this bill for the direct discovery, inspiration and training of the most valuable asset of all, the constructive

talent of the designer and the craftsman, yet it is here that the nation's industrial future is to be made or unmade.

1. The Value of Training Special Talent.

In proportion to the whole population the 2% who are engaged in the professions are comparatively insignificant, nevertheless, these doctors, lawyers, actors, preachers, teachers, designers, artists and sculptors provide the inspiration and guidance directly or indirectly, for whatsoever progress we make as a nation.

Talent being an etherial thing is very easily overlooked, not only by the mass of the people but too often by the very people who possess it. Just as one designer can keep a thousand workmen busy carrying out his ideas in furniture, for instance, and hundreds of salesmen busy selling it to the tens of thousands of users, in such a manner the welfare of the consumer, the salesman, the workman of the nation depends definitely upon the training of creative designers. Yet, as out of a population of 91,972,266, as shown by the 1910 Census, only about 2% of the people are engaged in the professions, and of these only 98,166 or about 5% of the professions and about 1-10 of 1% of the whole population are interested directly in the creative and industrial arts.

Is it worth while, therefore, to bother with so small a number, one in a thousand?

If the personal, domestic and civic, social, economic and industrial welfare of the citizen, the city and the nation are worth while, then we must trouble ourselves about using more of the talents of our people to utilize our national resources in the face of European competitors, even though in point of comparative numbers they seem insignificant.

The few advantages that man calls civilization are but the generalization of progress brought about by those talented ones of the human race. In these days when the machine almost dominates the doing of things, it is difficult to get those with manual gift to see the need or worth of using their talent. Unfortunately, we dwell in the cycle of the cheap and easy. Yesterday it was a "game" of "something for nothing," now in the days of high price reaction we are forced to pay "considerable for as little as possible," and in the near event of foreign competition there is no telling what may happen to our industries if steps are not taken to select the talented citizens and train them to use their skill in giving the world products for every day use that are at once attractive, durable and profitable instead of shipping our raw materials abroad in order that we may have the things which modern civilization demands.

2. How can Talents be Trained?

1. Only by providing proper facilities for the training.

2. By inspiring people to want the training.

3. By making the training very practical.

4. By showing how the training can be sold.

5. By seeing that it is bought and used.

1. Since most colleges find that the bulk of their students come from within a radius of 150 miles it is not difficult to see that the majority of the benefits of a local educational institu-

ABOVE—A CLASS IN FIGURE AND COSTUME DRAWING.—IN THIS CLASS SEVERAL PAGEANTS AND LITTLE THEATRE PRODUCTIONS WERE COSTUMED

BELOW—A COMMERCIAL DESIGN AND POSTER CLASS.—SHOWING SOME OF THE WAR TIME POSTERS WHICH WERE USED IN VARIOUS PATRIOTIC CAMPAIGNS WITH TELLING EFFECT. A FULL SIZED SHEET WAS USED FOR EACH DESIGN. CALSOMINE WAS THE MEDIUM

tion of any kind would accrue to the city with the wisdom to support and maintain it. Talents can be trained anywhere, sometimes better away from home than at home but if you want your home talent to bring a benfit to your home town, you must plan to train it there, otherwise, you will do well if it does not all stay where it is generally trained, in the larger city where you are not directly helped.

In other words, an industrial art school can not only benefit a city by training students to supply demands of the present industries but can be the experimental station for the training of the people who shall establish new industries to still further develop the personal and geographic facilities of a community to their utmost. A local school, therefore, is necessary if there are special local problems to solve.

2. Further, people with talent will not study unless they see the demand for it. Most people with talent apparently seldom realize that the arts have any connection with the industries of their vicinity. Industrial exhibitions, planned in co-operaton with local factories, stores and craftsmen, help people to see how city products are made and inspire them to discover and possibly use their aptitudes.

3and4. Not only do talented people need definite and practical, rather than purely appreciative training, but they must be taught to apply their efforts to the solving of the real problems of the community and through such work to fill positions in local establishments. This, of course, requires an enlightened type of manufacturer and tradesman, not always found in every city as yet.

5. Co-operation on the part of the school with manufacturers and tradespeople is the basis not only of helping them advance, but through them an industrial art school can make the whole community more progressive, because the modern business is based on the service and satisfaction of the customer, by helping create and fulfil a demand for the fine grade of goods which American standards of living require.

3. Does Your Community Need an Industrial Art School?

By making a survey of your city and state, you can ascertain, even as did Grand Rapids, whether or not an industrial art school would be of benefit. Go to your library, search out the most recent census reports on manufacturers and occupations; get data from your state labor commission and the statistics of your local chamber of commerce; get the state geographical and agricultural surveys; find out what your natural resources are, and compare these with the uses made of them. Then formulate your findings into a Chart such as Chart I. Make it large enough to be impressive. The original for this Michigan Chart was on detail paper, 36″ x 48″.

It showed that if a state ranks first in a given raw material, she will not be living up to her possibilities unless a similar rank is attained in goods made from that raw product. In (1) Lumber products, Michigan stands in a good position, since she ranks fourth in the raw product and has sufficient skill to use it effectively enough to hold second place in the finished product, furniture.

In using her mineral resources, (2) and (3), she still has progress to make, for although nature places her third for

ABOVE—RESEARCH CLASS IN LIBRARY AND MUSEUM.—UPON THE WORK DONE IN THIS CLASS, SINCE GRAND RAPIDS HAS NO FURNITURE OR COSTUME MUSEUM, THE STUDENTS BASED THEIR KNOWLEDGE OF PERIOD STYLES IN INTERIOR DECORATION AND COSTUME DESIGNS
BELOW—FURNITURE DRAFTING AND DETAILING CLASS.—HERE INSTRUCTION IS GIVEN TO SALESMEN, WORKMEN AND OTHERS IN THE DRAWING, CONSTRUCTION AND DESIGN OF GOOD FURNITURE AS NEEDED IN GRAND RAPIDS INDUSTRIES

CHART I

MICHIGAN AWAKE

YOUR NATURAL RESOURCES DO NOT MAKE YOU AS RICH AS WILL THE TRAINED SKILL WHICH PRODUCES MORE PROFITABLE FINISHED PRODUCTS

	Commodity	MICHIGAN	Competitor	REASON
1	LUMBER	4th.	Wash.	Nature
	FURNITURE	2nd.	N.Y.	SKILL
	COPPER ORE	3rd.	Mont.	Nature
2	BRASS & BRONZ	3rd.	Conn.	SKILL
	SHEET METAL	12th.	N.Y.	SKILL
	IRON ORE	3rd.	Minn.	Nature
3	CASTINGS	9th.	Penn.	COAL
	AUTOS	1st.	Ohio	SKILL
4	PAPER	8th.	N.Y.	SKILL
	PRINTING	8th.	N.Y.	SKILL
	WOOL	9th.	Wyo.	Nature
5	WOOLENS	10th.	N.Y.	SKILL
6	LEATHER	6th.	Penn.	SKILL
	LEATHER MFG.	13th.	Mass.	SKILL

MICHIGAN is 7th. in MANUFACTURING. SKILL makes products 59% more valuable — TECHNICAL TRAINING BACKED BY MANUFACTURERS & LABOR ORGANIZATIONS IS THE ONLY WAY TO BUILD THE STATE.

Make a chart similar to this for your own State, using the last United States Census Report as the basis for comparing the chief raw products with the chief manufactured products. The comparative rank of your State and the reason thereof will show whether or not industrial art schools would be of benefit.

raw copper and iron, the skilled use she makes of these metals only places her twelfth and ninth, since Eastern states train workers to supply the demand for finer work except in the making of automobiles. Michigan's opportunities for progress are shown similarly in (4), (5) and (6), paper, wool and leather products where design is involved.

Survey your own city statistics to discover the data indicated on Chart II under (2) economic facts, and (3) group factors.

If you find as you probably will, that the arts enter into the enrichment of your city by adding value to its manufactured products, and if there is no adequate way of training people with talent to carry on or establish related industries, it becomes your privilege to map out a plan of action toward providing an industrial art school that will fill the break which now exists in your city because of a lack of such necessary training facilities.

4. Chart Your City as an Art Center.

Make it very plain to yourself and then to all other citizens that they are all vitally interested in the Arts whether they are artists or not, since drawing and design enter into every department of modern life to a greater or less degree and effect the public (4) either as producers in factories or distributors in stores and finally as consumers at home.

Show how every one therefore is interested in the "Constructive Process" (5) five-eights of which is definitely connected with design, whether one buys or sells or makes anything, be it a breakfast food or a bungalow.

Point out also the various branches of understanding (6) which enable people to comprehend the step and possibly (7) to participate in that branch of endeavor. In this way you make a list of the various positions which could be occupied in your city by trained men, and the ends toward which those with talents should be educated.

Next list the courses necessary to train students in an Industrial Art School to fill these positions and you are ready to show the results (9) that should be expected of such an institution.

The next stepis to interest your townspeople in their city's predicament and to help you solve the problem of making your chart work out as a real institution.

Nothing could do this better or make the facts on your chart more definite than an exhibition of the products of your city showing the work of the various groups (3) whose tasks involve design and craftsmanship.

The place of drawing in the scheme of

making the products will be overlooked, however, unless the motives, sketches, designs, working drawings and models are shown along with the finished examples as outlined in the "Constructive Process." (5).

No better way of proving to the manufacturers, the merchants, the educators, the workers, citizens and artists themselves, the value of skilled workmanship in making raw materials more valuable has been devised.

If you would succeed as an art educator in the broadest sense, never show a finished product, drawing or design in any exhibition without showing also something of how it was accomplished. Many of our museums are happily making their collections interesting and valuable by this simple but very easily overlooked means.

5. Founding the Grand Rapids School.

It was in May 1916 that the chart shown here was prepared and brought to the attention of the Board of Education, after Dr. James P. Haney, of New York, had delivered an inspiring lecture to a group of representative Grand Rapids citizens on the "Crying Need of Grand Rapids." In this lecture, he showed how the city's future, and, to a great extent the taste of America in furniture, depended on an Industrial Art School which was located in the recognized center of the furniture industry.

A committee of representative citizens, including furniture manufacturers, designers, educators and business men knowing the value of the kind of training that would help the city's industries, urged the Board of Education to establish what has come to be known as the Grand Rapids School of Art and Industry. The top floor of a building was set aside for studios and work shops, a catalogue was published and students hearing of the opportunity through newspaper co-operation, began to attend the day and the night classes. The day students were largely graduates of the high schools and the night workers came from all branches of the

city's activities. The majority of the night students, it is interesting to note, did not apply for work connected with the furniture industry but chose the graphic arts at first, largely because most of them were connected with the furniture industry in the day time and had not been shown where drawings and designs entered into it or could help them.

However, through exhibitions wherein the romance of the furniture industry and the value of drawing to it has been pointed out, the attitude has been changed and considerable interest is evident in all branches of furniture drawing, rod making and detailing.

6. Courses Based on Industrial Needs.

None of the ordinary hit or miss methods of the academic art school are used. Each course is aimed definitely to connect up with the industrial needs of the city and prepares students definitely toward that end. In the day classes the work of the first year students gives them a firm foundation for later development into any branch of industrial or graphic art. The classes are arranged as follows:—

	8–11	12–3
Mon.	Drawing.	Historic Styles.
Tues.	Mech.Drawing.	Lettering or Modeling.
Wed.	Color.	Design.
Thurs.	Mech. Drawing.	Figure Drawing, Illustration.
Fri.	Drawing.	Design.

EVENINGS 7–9.

Mon.	Furniture Design, Commercial Design, Architectural Design.
Tues.	Life Class.
Wed.	Sketch Class.
Thurs.	Life Class.
Fri.	Furniture Design, Commercial Design, Architectural Design.

The night classes and the second year work are largely devoted to specialized pursuits, where many of the work-a-day problems of the students are brought to school for solution. Lecture courses on architecture and interior decoration and various other aspects of art appreciation have proven valuable ways of spreading the work and inspiring citizens to a fuller use of the school facilities.

Co-operation with the various interests of the city involving the arts has made the school not only helpful but has brought about a reciprocity which is most valuable.

7. Results.

Directly and indirectly the results of the first municipal Industrial Art School are very gratifying. A number of talented students have been helped to use their skill in building up the welfare of the city in various capacities, commercial designers, detailers, furniture salesmen, interior decorators, draftsmen, window decorators, art writers, furniture decorators and builders. The school and the students have participated in a Better Homes Show. They have staged several little theatre productions. They planned and successfully carried out several industrial art Exhibitions in collaboration with the Art Association, with the co-operation of the Furniture Manufacturers and the designers. They have won several contests. They have pointed out new ways of using the city's raw or unfinished materials.

Altogether the school is fulfilling its obligation to the citizens who support it through their taxes in that it takes raw talent (worth nothing without training), educates it and keeps it in the city to make the city a better place to live in by skillfully using raw materials (also worthless without refinement) to the greatest advantage as the basis of the city's riches and individual culture.

8. The Future.

In time, the seeds which were planted in 1916 and are now sprouting, will, through the interest the school is creating, bring many changes for the betterment of the city. Already a movement is under way and tentative plans have been drawn for an Institute of Decorative Arts which will house the most comprehensive educational collection of the arts connected with the home. The School will be located in this building and through this combination, Grand Rapids will not only enhance her reputation as a furniture manufacturing and selling center but she will also become the Mecca for the inspiration of good taste in the American Home and perhaps through her efforts there will come the true American type of the style of decoration.

9. Conserve Your City's Talent Now.

As a business proposition every city should do something to conserve its talent. This is work for the Art Association, the Womans' Clubs and the Mens' Dinner Clubs, to undertake. If you can prove that civic progress demands a class in advanced drawing on Saturday in a rented store down town or even a school building, in time your Board of Education will be glad to fulfill the enlightened demands of their fellow citizens.

America's future in the arts and industries depends upon her trained and talented workers.

America's future depends on you.

A MODEL ROOM from an Industrial Arts Exhibition planned and staged at the Grand Rapids Art Association by the School of Art and Industry which showed definitely the results that could be brought about when Art Societies, Art Schools, Designers, Manufacturers, Workmen and Merchants bend their efforts toward giving themselves and the people the opportunity:

1. *To see* how the designers' work is the basis of the good things that make the home attractive.
2. *To appreciate* the skill which the workman must possess in carrying out the designer's plan.
3. *To understand* the various steps through which decorative and useful objects go in becoming the finished articles.
4. *To study* ways of and standards of using industrial art objects advantageously at home and elsewhere.
5. *To value* the skill and training necessary to be able to produce, sell or use fine merchandise.
6. *To know* the part the art schools are playing in the discovery and training of talent which makes the raw materials of the region an asset through skilled manufacturing processes.

This exhibition included furniture, textiles, printing, plasterwork, carving, dyeing, architecture, landscape gardening, commercial design and interior decoration. In each case, not only the finished product was shown but most of the intermediate steps between the rough sketches or design and the completed articles were shown and labelled. Not only were citizens interested in such an arrangement but out-of-town buyers made inquiries which indicated that it was more than a show. The exhibit was selling ideas and the goods that carried them out as well.

A MODEL ROOM

The model room was planned and arranged by students of the School of Art and Industry with the co-operation of the Joseph Hesse Co., the Klingman Furniture Co., and the Grand Rapids Marble and Fireplace Co. In choosing the furniture and the decorations, the attempt was made to maintain the utmost simplicity and at the same time the high traditions of good American Georgian types. With the exception of the floor lamp this has been done. The Adams type mantle set, the William and Mary and Ann chairs, the Jacobean table, a Chippendale type desk, together with another chair of Sherarton taste and two slat-back, rush seated chairs create a simple yet satisfying environment which proved an inspiration to the average citizen.

Besides lectures in which the relation between design and the home was pointed out, hand bills were sent to all the factories in order that the workmen might see their work exhibited in an art gallery along with the work of the painters and designers.

This simple co-operation between the producers, distributors, and consumers attendant upon an understanding of each other's problems is one of the most vital industrial art assets which America has long lacked and which she now needs most.

There is no town no matter how large or small in which similar exhibits cannot be arranged with gratifying results.

The Organization and Administration of Art and Industrial Arts in Elementary Grades

LEON LOYAL WINSLOW

With illustrations showing stages in the progress in house building and furnishing, contributed by William R. Peters, Supervisor Industrial Arts, Hastings-on-Hudson, New York.

WE are at last beginning to realize that the arts which industry has developed are entitled to recognition in all grades of education. In spite of the fact that industry has ever been an important element in life, it is only within the past few years that instruction in it has been given any amount of consideration at all commensurate with social demands. New ideals controlling the aims of education are today beginning to bring about long needed changes in subject matter and in the methods of its presentation, while courses are being reconstructed that they may more effectively meet the demands which are being made upon them from outside.

This work in the school takes on a new significance when America, victorious, is preparing to meet the artistic and industrial requirements of a new order of things. Our industrial products must be made attractive if they are to hold their own in the international competition which is already upon us. The problem of making artistic the consumers of the products of industry as well as the producers of these products is as ever before the schools. It must be solved by the co-operative efforts of all grades of education; the kindergarten, the elementary school, the intermediate or junior high school, the high school, the special vocational schools and the college.

The supplying of what is lacking aesthetically in daily life will always be a primary object for the study of art. All individuals should have the opportunity of becoming acquainted with the best examples of painting, sculpture, and architecture, literature and music, to know examples and to enjoy them. There is no doubt that an appreciation of the products of art is essential to complete living. Yet there is a kind of art study which in particular should be exemplified in all elementary schools; it has as its aim the cultivating of one's ability to choose, as well, as in some measure to produce works of art.

"We did not make substantial progress in moral teaching as long as we were content to confine it to the Sunday School or other classroom period. Progress came when morality was treated as an aspect of the child's whole life. Art teaching must undergo a similar evolution. It is well enough to teach art in special class periods in connection with special subjects. It is better to care for art everywhere in school life."[1] Art is most effectively taught in connection with all school subjects.

Industry is the act of doing things: it deals with the transformation of natural or raw materials into finished products; it means perseverance and hard work and skill; it constantly involves art; it means handwork combined with headwork, a union, by the way, which is just as close as is that of art and industry. The hand was once thought to be unworthy of an educated head.

[1]Henry Suzzallo in the introduction to Henry T. Bailey's "Art Education."

ASSEMBLING THE WALLS

FINISHING TOUCHES TO THE ROOMS

Art and industry, united in actual life, are at last to be united in education. Schools are accepting the new point of view which is bound to bring about improved public taste and an improved product at the same time.

A vast body of subject matter with which all men and women of true culture should be familiar is being collected, organized, evaluated, and crystallized into a new school study. What the study is called makes little difference. We choose to call it industrial arts. *Industrial arts as a school subject has been defined as the distilled experience of man in his resolution of natural materials to his needs for creature comfort, to the end that he may more richly live his spiritual life.*[2] This definition provides for an elementary school subject which will deal primarily with the industries, a study of industry from the social side as well as from the material side, a cultural study of industry with the emphasis upon the how and why of industrial operations combined with a real appreciation of industrial life.

This point of view accepted, we shall see that for the purpose of organization most of the drawing (art) and construction work done in schools will fall to the subject of industrial arts, not because it is a *manual subject*, but rather because it is an *industrial subject*, and because industry deals with drawing and construction more than do history or geography or arithmetic. As phases of school life, drawing and construction are at the disposal of all school studies, but the time has gone by when drawing and manual training should be regarded as subjects in the elementary school course. Either is but a part of a subject which it is intended to clarify and intensify. Let us choose to form the new subject of industrial arts by combining drawing and construction with an educative subject-matter relating to industry.

Subject matter should be chosen from the industries most important to man, the products of which might be arranged in groups classified under the following heads which name the needs satisfied:

1. Food; 2. Clothing; 3. Shelter; 4. Art Products and Records; 5. Utensils; 6. Tools and Machines; 7. Light, Heat and Power.

Food will include the industries engaged in the transformation of cereals, fruits, vegetables, milk, meats, eggs, and fish; *clothing*, the industries engaged in the transformation of wool, cotton, linen, silk, leather; *shelter*, the industries engaged in the transformation of wood, stone, metals, clay, cement to meet man's needs for homes and public buildings (this topic includes architecture); *art products and records*, the

[2]Frederick G. Bonser in "Some Fundamental Values in Industrial Education."

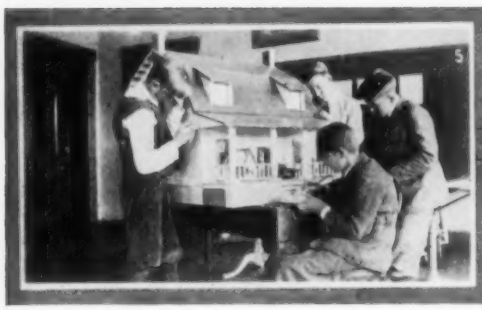
PAINTING FURNITURE HANGING CURTAINS

industries engaged in the transformation of wood, leather, metal, textile materials and pigments to meet man's needs for books and printed products and for works of art, (this topic includes all objects in which the art element is isolated and whose function is aesthetic primarily, i.e., painting and sculpture); *utensils*, the industries engaged in the transformation of metals and of non-metallic earth materials to meet man's needs for receptacles for liquid and solid materials used for the most part for domestic purposes; *tools and machines*, the industries engaged in the production of implements used in manual labor, and the more complicated mechanical devices called machines; and *light, heat and power*, the industries engaged in the transformation of natural materials and natural forces of these commodities.

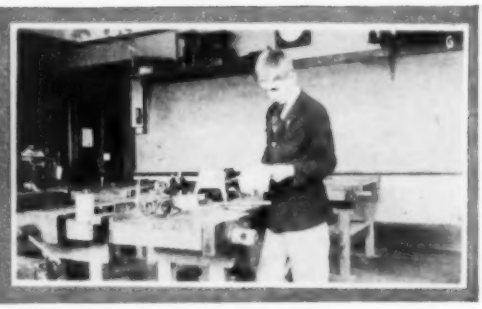
The industry once chosen, the class is put to work investigating it, collecting information from all possible sources. Much of the material will be obtained through actual contact with those engaged in it or who handle its product. Some facts will be gleaned from reference books. The topics to be considered will depend upon the information available and the ability of the class. The following suggestions will be helpful to the teacher who desires to know what may constitute subject matter: (1) The value of the industry to man; how we are affected by it. (2) The evolution of the industry; its story, its heroes of invention (history). (3) Characteristics of the product; what constitutes excellence. (4) Materials employed, where they come from (geography). (5) Processes involved. (6) Tools used. (7) Healthfulness (hygiene) (8) Hours and wages. (9) The training of the workers. (10) The part played in the industry by arithmetic. (11) The part played by drawing and design. (12) References to the industry found in literature. (13) The industry as depicted in art.

The subject-matter of industrial arts will include such principles of the art as are involved continually in each industry as it is taken up. Masterpieces in painting and sculpture, considered as records made by man at various times and under varying conditions, will be treated from the aesthetic side, primarily. Art instruction will be amply provided for and yet art will not be treated as it has sometimes been in the past, as an end in itself.

The handiwork is based upon the subject-matter studied and is of two kinds: (1) *Drawing*, including color, representation and design, and (2) *Construction*, including the preparation and combination of materials.



GENERAL CONTRACTOR AND ASSISTANTS



METAL FIXTURES

All projects are to be considered as means of expressing ideas and feelings gotten from a study of the activities and not merely as pieces of handwork to go along with the various studies. Handwork should always result from a definite purpose calling for it.

The Course of Study. As a school subject industrial arts has two functions to perform. *First*, it will serve the purpose of industrial appreciation by furnishing a foundation of general intelligence which has the two-fold object of providing pupils with sufficient industrial education to meet their needs as children, and of leading up to more advanced differentiated courses in the high school; *second*, it will serve the purpose of a unifying agent in the curriculum by furnishing a motive for much of the other school work which in turn it will clarify through activities (drawing and construction).

The work described in this paper should be adaptable to school conditions everywhere. In communities where little freedom is allowed, the regular course can at least utilize the materials of industry and its practical activities. Where considerable freedom is allowed, the teacher will be able to employ the following or similar constructive plan.

1. The drawing period will be made over into a combined industry-drawing-construction period, the full time being given to the subject of industrial arts.

2. Drawing and art work, including representation, color, and design, lettering and construction will become a part of all school subjects as occasion demands.

3. Construction or the combining of materials will become a part of all school subjects as occasion demands.

4. The industrial arts period will be given over (a) to subject matter relating to industry and (b) to manipulation for the sake of making clear the subject matter, the same to take the form of representation, design, color, lettering and construction or the combining of materials.

5. The industries to be taken up during a definite period of time will be listed.

6. From this list the industry to be studied will be chosen.

7. Instruction in this industry will be provided. It will be made the subject of study *in each of the six grades during the same period of time.*

8. The second industry to be studied is considered, then another and another until the full year's work is planned.

9. The next year the course as planned will be improved.

It is suggested that for the sake of an effective organization all six grades

MAKING CURTAINS ELECTRICAL WORK

pursue the study of the same industry or industries at the same time. A workable program provides for a consideration of the seven industrial groups which are assigned to the ten months of the school year. It will be noted that in it two months each are given to the food, clothing, and shelter groups; and one month each to the combined groups, tools and machines, and light, heat and power. The calendar program follows:

September—Food;[3] October—Clothing; November—Shelter; December—Art products and records; January—Utensils; February—Tools and machines; March—Light, heat and power; April—Food; May—Clothing; June—Shelter.

The ideal conception of a course of study would be where the entire school system is operated on a plan of perfect articulation of the various subjects, ample use being made of the project method of instruction. In such a school system, matter would be adequately provided in the other than industrial arts. The mission of industrial arts in such a system would be primarily the providing of illustrative handwork.

THE HOUSE FINISHED

There is no race, no political division, no literature, no history, no science which is not intimately associated with the very topics about which the industrial arts course is organized. This means that industrial arts as a subject is continually at the disposal of all the other subjects. It is important that it be controlled by certain points of emphasis in order that systematic instruction may be realized.

[3]The topics may be assigned to different months if desired. They should not be used to interfere with the project method of instruction.

Points of Emphasis in Subject Matter and Two Possible Projects Suggested for Each of the First Six Grades[4]

(A) FOOD. (September and April)

I

Vegetables and Fruits

Subject Matter

The preparation for immediate use of the common *vegetables*, beans, peas, and corn, beets, onions, parsnips, potatoes, sweet potatoes and turnips, and of the common *fruits*, pears, apples, quinces, bananas, apricots, dates and peaches.

Ways of storage for the vegetables and fruit stores; vegetable cellars and cold storage; ways of preserving the vegetables and fruits preserved, drying, canning and pickling.

Projects

Drawing to illustrate mother paring potatoes.

Drying some corn.

II

Bread and Cereals

What bread is and how it is made; white bread, brown bread, graham bread, whole wheat bread, corn bread, crackers. How flour is made, entire wheat flour, graham flour, corn meal. How breakfast foods are made from wheat, oats and rice.

Cut paper picture to illustrate baker at work.

Grinding some wheat.

III

Beverages and Sugars

Apple juice and grape juice, chocolate, cocoa and cereal coffee, how they are manufactured and prepared for use.

Honey, maple syrup, molasses, cane sugar, beet sugar, corn syrup; how they are prepared for use.

Drawing of a press used in the making of cider and vinegar.

The making of cocoa.

IV

Milk and Eggs

Milk (whole and skim), cream, butter, butter milk, cheese, condensed milk, how they are prepared for distribution as foods.

The preservation of eggs and their preparation for use.

The making of butter or of cottage cheese.

Drawing of chicken coop, egg carrier or trap-nest.

V

Meat and Its By-Products

The preparation of meat as a food, together with the preparation of its by-products for various uses, exclusive of woven fabrics. Hides are used in the making of leather; bone in the making of buttons and handles and in fertilizer; tallow, in the making of soap and fat in making of lard, etc.

The arrangement of a class chart to illustrate the products and by-products of beef, pork or mutton.

Lettering of title and of subordinate captions for the above.

VI

Fish and Its By-Products

Procuring and preparing fish, fresh fish; preserving by salting (cod), by smoking (herring) and by canning (salmon). The making of the by-products, glue, and isinglass. The procuring and preparing of shellfish, (oysters, clams, crabs and lobsters).

The making of an illustrated booklet to show how fish are salted, smoked or canned.

The designing of a cover for the above.

[4]Projects were arranged in co-operation with Mrs. Hazel T. Hathaway, specialist in drawing in the Examinations Division, University of the State of New York.

B. CLOTHING (October and May)

I

Clothing Materials

Subject Matter

A recognition of wool, cotton, linen, silk, rubber, leather. The use made of these materials in the making of articles of clothing adapted to the changing seasons, autumn, winter, spring, and to the various climates, cold temperate, hot. Types of clothing based on the seasonal changes of the year and on the climate as we find them illustrated in primitive life, the Indians, the Eskimos.

Projects

Imaginative drawings of Eskimo children at play dressed in appropriate costumes.

Choosing the wool sample, the cotton sample, the silk sample from the collection of sample textile fabrics.

II

Wool

The transformation of wool into cloth involving the shearing of the sheep, washing, combing, carding, spinning, dyeing, weaving and pressing. The uses of wool in the making of costumes, of blankets and rugs.

Sand table arrangements of the country of the sheep raisers.

Making patterns and garments for a doll.

III

Cotton

The transformation of cotton into cloth involving picking from the plant, ginning, baleing, mixing, loosening, carding, spinning. The uses of cotton thread in sewing. The manufacture of cotton garments. The conditions under which garments are produced, in the home, in the factory, cotton seed as a by-product of the cotton industry. Its use in soap making and cookery.

Making a collection of examples of cotton fabrics, (samples 1″ x 2″ or larger, all uniform.)

A holder of gingham, embroidered in cross stitch design first on square paper. Cotton seed may be planted in a window box in the school room, germinated inside, the little plant set out in the school garden in May to mature during the summer that the cotton may be used by the next third grade the following October.

IV

Linen

The transformation of flax into linen cloth involving the processes of drying, rippling, retting, breaking, scutching, carding, spinning, and weaving. The use of linen thread in the manufacture of cambric shirtings, sheeting, collars and cuffs. Emphasis on the weaving of fabrics. Uses of flaxseed in the making of linseed oil which in turn is employed in painting, in the making of printers' ink and in medicines and in the manufacture of linoleum.

Design for a colored rug with stripes.

Flax seed may be planted, germinated inside, and little plants set out in May for use the following October.

V

Silk

How silk fabrics are made from the cocoon of the caterpillar known as the silkworm. The soaking of the cocoon, reeling off the continuous fibres forming hanks. Silk is procured by the manufacturers in the form of hanks. The fibre is recleaned by passing through parallel plates.

Drawing of mulberry leaf and silk worm.

Cloth covered round paper box.

Subject Matter	*Projects*
It is woven directly. This single fibre silk is called *pongee*. Other silk made from the broken threads and finer fibres from the inside of the cocoon (silk waste) are carded and spun like cotton and wool. Silks are sometimes *loaded* with chemicals to make them weigh more. Such silks are not durable.	
VI LEATHER	
The making of leather by the soaking of hides in a lime solution, scraping and removing the hair, (the corium or inside layer of the skin) is used in the making of leather. The outside layer, epidermis, is not used, tanning with tannin (tanic acid), smoothing and compressing by scouring and rolling. Sole leather and harness leather are made in this way. Dressing fine leathers by filling the pores with oil to increase their flexibility and resistance to water. Staining. The use of leather in making shoes. *Morocco leather*, used in bookbinding is made from goat skins. *Russia Leather* retains the aromatic odor of birch bark used in tanning. *Patent Leather* coated with lamp black and linseed oil, rubbed with pumice stone and varnished.	Pad back or pocket book. The covering of a baseball.

(C) SHELTER (November and June)

I TEMPORARY DWELLINGS	
The dwellings of primitive people whose resources were chiefly flocks and herds. The suitability of the following as dwelling places: *natural caves*, artificial caves, caves with a wall built as a further protection against wind and weather, three walled structure built against a cliff, four walled structure. Homes of the American Indian, the *wigwam*, and the *hogan*. The *Eskimo house*, the *log cabin*.	Imaginative drawing of a play house. Drawing of Hiawatha's house.
II MODERN HOUSES	
Discussion of wooden buildings and their advantages and disadvantages as compared to houses of brick. Now the carpenter builds in wood and the mason in brick and stone. The various rooms and their uses: The *living room*, the *dining room*, *kitchen*, *bathroom*, *bedrooms*, suitable wall colors and wall papers. The *apartment* house. The *bungalow* and its advantages.	A wooden play house. (See illustration). Colored wall paper design for the play house.
III PUBLIC BUILDINGS	
A consideration of such common types of public buildings as state buildings, post offices, city halls, court houses, public schools, libraries, art museums, churches, theatres, depots, fire houses and police stations. Building materials best suited to the construction of certain types. Architectural beauty and how it is attained. The care of public property.	Model of a post office, library, church or other public building. Drawing (front view only without perspective) of the building modeled.

IV

Furniture

Subject Matter

The various types of furniture, construction; dressers and sideboards, tables and desks, chairs, beds and sofas, pianos and phonographs, mirrors and lamps. Wood and other materials entering into construction. How furniture is made in the factories. Construction, color, finish and cost. Art in furniture.

Projects

Collecting illustrations showing good and bad design in furniture and mounting these properly.

Design for a kitchen cabinet or other article of furniture. (Simple face value without perspective.)

V

Household Textiles

Hangings, carpets and rugs, upholstery materials, table linen, bed clothing, towels. What constitutes excellence in each of the above. Quality in material, color and pattern. ' How textiles are produced by weaving. How they are colored by dyeing. How patterns are produced in weaving with colored threads. How patterns are produced by printing. Embroidery.

Design for a table runner.

Cutting stencil and applying the design.

VI

Interior Arrangements

The disposition of floor and wall covering, of furniture and of pictures. A consideration of simplicity and convenience as applied to arrangements for living room, dining room, bedroom and kitchen. Sanitation and hygiene as important factors, particularly in the arrangement of bedroom and kitchen. The importance of cleanliness and ventilation. Harmony in interior arrangements.

Drawing a plan of a room.

Cut paper design of the wall of the room showing the arrangement of windows, doors, articles of furniture, pictures, etc.

D. RECORDS AND WORKS OF ART (December).

I

Printed Matter

What printing is and how it is done; how letters, figures and pictures are printed. The rubber stamp and the pad and how they are used. Materials used in printing, *ink and paper*, *type*. The printer who uses a *press* in order to print faster.

A–B–C initial letters accompanying (or pasted over) pictures cut from magazines. *A*, and an *apple*, etc. Colors may be used.

II

Books

Preliminary observation of our school books. The story of how we came to have books. Tradition by word of mouth, covenants, the *scroll*, the *folded sheet*, *laced sheets*, the *book*. The bookbinder and the materials which he uses: Paper, leather, cloth, thread, glue, paste. The tools necessary for simple bookmaking; pencil, ruler, scissors and how they are used. The care of books.

A–B–C folder for the above.

Single signature flexible covered pamphlet to be used for picture study illustrations.

Fastening together in an attractive way drawings made in the course and making a simple line cover design with appropriate lettered titles.

III

Paper

Subject Matter

Preliminary observation of paper contained in school books, in newspapers and magazines, writing paper, wrapping paper, wallpaper. The story of how we came to have paper. The early use of *bark* and of the *skins of animals, papyrus, parchment, paper*. How paper is made by hand, the mold and deckyl. Water marks, their significance and how produced. How paper is made by machinery. How paper is sold in sheets by the quire and ream and by the pound.

Projects

Collecting of the material from which paper is made and making some paper. (The teacher may demonstrate this before the class if preferred). Construction of a paper box for a predetermined use.

IV

Painting

The artist and his work. The landscape painter and his materials, water color or oil and paper or canvas, water, oil, and turpentine. The brush and palate knife. *Landscapes* in winter, spring, summer, fall. Land, water and sky. Colors in nature. The studio of the painter of portraits. *Paintings of children and of adults.* The suitable framing and hanging of pictures.

A single signature stiff covered book for picture study illustration.

Drawing or painting of a flower or landscape.

V

Illustrations

How pictures are drawn or painted and how they are sometimes photographed to be used as illustrations in books and newspapers. The camera, its lens and plate or film. How the plate or film is developed and prints are made. The making of a *half tone* or *zinc etching* for printing on paper. The qualities present in a good illustration, whether or not it is true to the thing represented, beautiful, and tells the story it is intended to tell.

Making pencil sketches in outline only, to illustrate good compositions in landscape.

Making a portfolio with stiff covers for the above and decorating it (if time permits) with a small appropriately printed unit with a wood or linoleum block.

VI

Sculpture

The sculptor works with clay, wax, and stone and sometimes in plaster and bronze. He uses modeling tools and chisels. He makes sketches and drawings to help him in working out his ideas. *Statues of men and animals, equestrian statues.* Sculpture as it is used architecturally.

A collection of illustrations of the best modern examples of sculpture.

Making a book of several signatures for the above.

E. UTENSILS (January).

I

Utensils and Toys

How toys are made, dolls, animals, kiddie cars. A recognition of the common utensils used about the home. How *crocks, bowls, cups, and saucers and plates are made from clay;* preserving jars, tumblers and cooking utensils from glass, and stew pans, griddles and spiders from metal.

Imaginative drawings of toys.

Drawings of utensils (not from the objects) or of utensils in use in the kitchen.

II

EARTHENWARE

Subject Matter	*Projects*
The transformation of clay into articles of use, bowls, dishes, vases, etc. *How dishes were first formed by hand,* decorated with natural earth colors and baked in an open fire. Pottery of the American Indians. How pottery is made today in the factories. Why clay is used in making dishes.	Cut paper silhouettes of a bowl or jar decorated with rhythmic cut paper borders in colors. Making of a clay bowl or vase.

III

CHINAWARE

How chinaware and porcelain are made from the finer grades of clay. *The potter's wheel and how it works* extensively today in the making of pottery and dishes. (The great amount of time required in the forming of the dishes.) The jigger. The modern kiln. Bisque and glost firing. The fuels used, coal, gas or oil. The modern method of decorating chinaware with decalcomania paper.	Silhouette colored design (in pencil and water color or oiled crayon) of a salad bowl. Realistic representation of the above.

IV

GLASS

How glass is made from sand; window glass, bottles and pitchers, tumblers. The use of colored glass in the making of windows, lampshades and utensils. Where the best glass is produced and why. The qualities possessed by glass utensils which determine their value; convenience durability and beauty.	A chart showing good and poor examples of glassware. Drawing of a tumbler with simple *etched* line decoration.

V.

IRONWARE

The making of such utensils as frying pans and griddles from iron. The making of so-called *tinware.* The use of *galvanized iron* in garbage cans. How iron is obtained from the ore. The ore producing localities.	Plan for a candle sconce to be made from a "tin can." Making of the sconce and decorating with enamel oil paints.

VI

SILVERWARE

How silver differs from iron. How utensils are made from silver by *casting,* by *stamping,* by *hammering.* Hollow ware such as cups and pitchers and how these forms are made. Flat ware as plates and saucers and how it is made. The making of knives, forks and spoons. The qualities possessed by silver utensils which determine their value; the amount of the metal used, convenience, durability and beauty.	Collection of examples of good and bad design in silverware. Drawing of a piece of silverware, simple and of good design.

F. TOOLS AND MACHINES (February).

I

TYPICAL TOOLS

How man first worked without tools other than his hands, feet and teeth, arms, legs and back. How later he felt the need of *tools to pound, chop, bore* and *grind,* and with which to *hold, mark, measure* and *weigh.* How the necessity for food made imperative the tilling of the soil which in turn demanded the use of implements, the *hoe* and *rake,* the *plow* and *harrow.* How the building of houses required still other tools.	A collection of crude natural objects which might be used in chopping and cutting; stones of appropriate shape, gnarled pieces branches, etc. Imaginative drawings of early man in the act of using primitive tools.

II
Grinding

Subject Matter

How corn and wheat are made into meal and flour by grinding. How the Indian used a stone *pestle* and a hollow stone or *mortar* in grinding grain. The later use of stones in grinding grain at the mill. How machinery is used in milling at the present time.

Projects

Use of the mortar and pestle in grinding grain, corn or wheat.

Illustrative drawings of American Indians grinding corn.

III
Pressing

How machinery is used in pressing apples to make cider and vinegar. The pressing of clay to make brick. The pressing of cloth and of clothing by ironing. The pressing of pulp to make paper. The pressing of books. The pressing of type upon paper in printing. The pressing of metal, iron and aluminum in the making of utensils. The *lever* and the *screw* and how they are used in machinery for pressing.

Diagram drawing of a cider press.

Making bricks by pressing clay in little wooden forms made by nailing blocks of wood together.

IV
Holding and Cutting

The lever and screw are used in holding as well as in pressing. The *vise* used in woodworking and especially in furniture and cabinet making shops. Wood is cut with *knives*, *chisels* and *saws*. How cloth and paper are cut. The cutting of glass and metal. The care of tools and machinery. The necessity of frequent oiling and sharpening.

Collecting advertising and catalog illustrations of holding and cutting tools.

Making drawings of the simple cutting tools, *from the objects themselves*.

V
Measuring

The use of *rules* and *tapes* and of *squares* and *callipers* in measuring distances, of *measures* in measuring volume and of *scales* in measuring weight. How foods are measured, textile fabrics, fuel, metals. The mechanism of balances or scales used in weighing.

Simple sketches of pan-scale and steelyard as balances. Comparison made with balances in design.

Small comparative sketches illustrative of measures by volume, square inch, cubic inch, etc.

VI
Transportation

The horse drawn *wagon* and *carriage*. How these vehicles are made and operated. The *automobile* and *motor truck*, *locomotive*, and *steamboat*.

Chart to illustrate evolution of transportation.

Drawing of a vehicle.

G. LIGHT, HEAT AND POWER (March).

I
Beasts of Burden

The *dogs* of the Eskimos used in drawing sledges. The *reindeer* is used for drawing sleds in Alaska. The advantages of sleds and sledges in cold countries and in our own climate in winter. The *ox* and the use of the wheel in the ox cart. The use of the wheel in the tread mill run by dogs, oxen or horses. The *horse*. The *elephant*. The *camel* and the caravan.

Modeling in clay, horses, camels and elephants at work.

Imaginative drawings of a caravan.

II

The Air

Subject Matter

The use of the sail to make the wind carry boats over the water. How the wind is used to turn the *wind mill* which pumps the water. The vane and sails of the windmill. The *balloon* which floats in the air. How the kite made possible the invention of the *aeroplane* by the Wrights of America.

Projects

Drawing of a windmill pumping water and of a sail boat in the wind.

Drawing of kites and an aeroplane.

III

Water and Steam

The *waterwheel* and its use in producing power. The *water motor* an out-growth of the water wheel. How water heated produces *steam*. How steam is used in heating, cooking and in the production of power. The *steamboat* and the *locomotive*.

Diagram to show how the waterwheel works (A model may be constructed from paste board by the teacher, and sand may be substituted for water in operating it for demonstration.)

IV

Wood and Coal

How lumbering is carried on. The lumber camp. The best fuel woods. The importance of conservation of our wood supply. *Hard* and *soft coal* and how they are mined. The making of *gas* from soft coal burned in a retort. *Coal tar* and *ammonia* as by-products of the gas industry.

Drawing to show the layout of a lumber camp.

Diagram to show how coal is made.

V

Oil and Gasoline

"Sicilian Oil" used for illumination at the beginning of the Christian era. The beginnings and development of the oil industry in the United States. How oil is procured from the ground in the form of crude petroleum. The *oil well* and how it works. *Storage tanks* and *pipe lines*. The refining of *petroleum* by boiling in a still. How the vapor is condensed in a series of iron pipes surrounded by cold water. How the oils are led off into their respective tanks as *gasoline*, *naptha*, *benzine* and *kerosene*. The commercial uses of these products. Further processes are required in the production of the lubricating oils and *vaseline*.

Drawing of a map to show location of oil wells.

Diagram of oil derrick and well.

VI

Electricity

The transformation of power produced by moving water and by steam into electricity by means of a machine called a *dynamo*. How this is accomplished in the power plants at Niagara Falls. The use of electricity in lighting, the *arc light* and *incandescent lamps*. Its application to communication in the *telegraph* and *telephone*. Its uses in heating; the electric heater, the *flat iron*, *grill*, *stove* and *percolator*. The electric *motor* and its uses in driving machinery and in propelling automobiles, locomotives and trolley cars. The uses made of electrically driven *vacuum cleaners* and *washing machines* in the home. A comparison between modern and primitive methods of lighting and heating; the torch, the candle, the kerosene lamp, the electric lamp, fire place, stove, furnace.

Drawing to show the difference in construction between an arc lamp and an incandescent bulb.

Collecting and mounting advertising material selected to illustrate.

Today, just fifty years after the establishment of drawing courses in Massachusetts and forty-two years after the introduction of manual training in New York, we are beginning effectively to organize this hand work by combining manual training and drawing to form a unit controlled largely by an industrial subject matter. One used to hear a great deal about the value of nature drawing, object drawing, illustration and construction in the school course much as if they were subjects or at least ends in themselves. Now handwork is considered as a means to an end, as a help in putting across a body of experience of real educational worth.

Drawing and manual training are indeed in our day having a re-birth in industrial arts for both are gaining distinction in the eyes of the teacher who is able to see in industrial arts much which he failed to recognize in either drawing or manual training heretofore. Industrial art is bringing more art and more industry into education than was ever provided in the past by courses in drawing and manual training as such. There must still be nature drawing, but it will have a purpose; there must still be object drawing but it will be significant; there will be illustration—illustration filled with meaning and with purpose; there must still be construction, more of it than ever before, but all this activity will be carried on with a consciousness upon the child's part of its industrial value and of its place in the great world outside the schoolroom's walls. There will be more art too because art will come as the reward of spontaneous self-expression in a field sufficiently restricted to make expression possible. Art must continue to be considered as a phase of the child's school life.

INDUSTRY IS, IN ITSELF AND WHEN PROPERLY CHOSEN, DELIGHTFUL AND PROFITABLE TO THE WORKER; AND WHEN YOUR TOIL HAS BEEN A PLEASURE, YOU HAVE NOT EARNED MONEY MERELY, BUT MONEY, HEALTH, DELIGHT, AND MORAL PROFIT, ALL IN ONE.

Robert Louis Stevenson

An Art Awakening

D. CARTMEL

ON ONE of the busiest streets in San Francisco, lined with stately buildings and filled with the rush and noise of commercial life, stands the Aztec Studio. The name alone recalls visions of races and cities whose origin is lost in the night of time and to the searcher after the artistic, the curious or exotic, this studio will prove a mine of interest.

Entering and ascending the stairs we find that we are indeed in a new realm of ideals and projects far removed from the busy world outside. The walls of the hall are covered with strange and mysterious decorations which hold the gazer's attention with the strength and beauty of the design. These are copies of the famous tablets of Palenque, that mysterious city which was old before the discovery of America. They are one of the finest achievements of primitive American Art, in which the strength and beauty of their work is well illustrated. These wonderful colored drawings of priestly figures surrounded by strange symbolic designs strike the beholder with a feeling of awe. This hall decorated in every detail with motives derived from Mayan Art impresses one with the wonderful advancement made by that race.

Entering the main hall we find it a veritable museum in itself. Replicas from the most famous monuments found in ancient America, original carvings, and superb pieces of antique and modern Mexican pottery, textiles and interesting curios adorn the shelves or repose in the cases. The walls are covered with strong and brilliant designs which are different from any seen before. They are not Egyptian nor Chinese, nor do they bear any resemblance to any other ancient nation. They are purely American in origin, a legacy we inherit from that pre-Columbian Art and culture which once flourished in the new world.

This truly wonderful studio with its splendid collection is the work of Francisco Cornejo, the Mexican artist, who has devoted fifteen years of study and toil to illustrate and further his ideals in reviving these arts of the ancient civilization of this continent. Gifted with a fine artistic sense, and having access to the splendid public and private collections in the City of Mexico, he was powerfully influenced by the treasures of art and architectural relics to be found in that land of romance and mystery, and early in his career he came to the conclusion that the works of these ancient people would be an inspiration for the development of a pure American Art. Though these arts were known to the scientific world, yet no artist had made use of them to any extent before. If American artists would be influenced by any form of Art, why not make use of the wealth of decoration inherited from our primitive sources.

The stately ruins that tower in solemn grandeur over the plains or lie hidden in

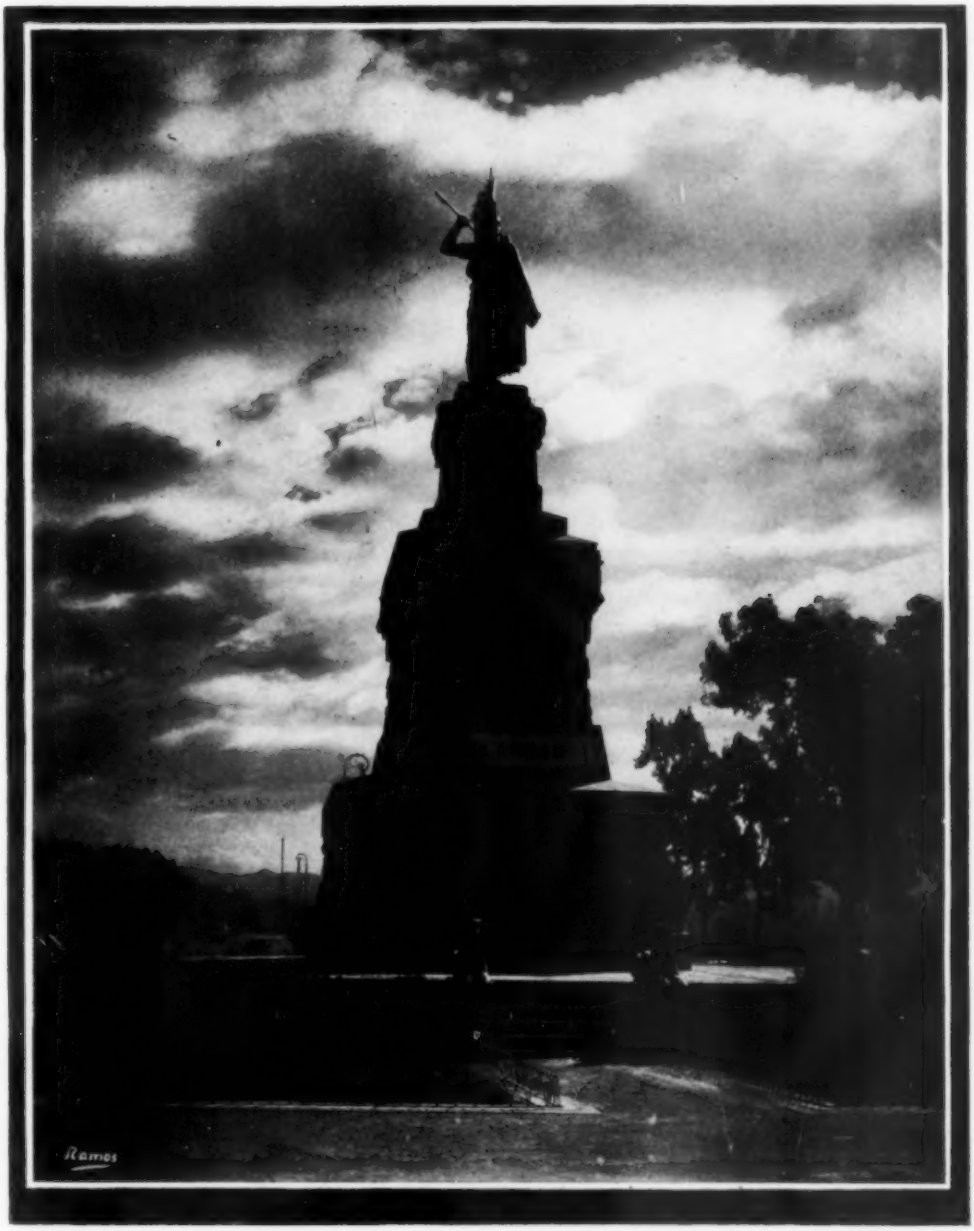
the jungles of Central America and Yucatan, ruins which with their marvelous decorations and the amazing skill displayed in their construction, have alike been the wonder and admiration of the world, afford an inexhaustible fund of inspiration, for all who wish to turn to new and purely American sources. Our decorative arts derived from European or Oriental motives, have resulted in a mingling of heterogeneous types, and in combinations devoid of good taste. Weary of these conditions, surfeited with the medley of meaningless styles, and often tawdry effects, we find it refreshing to turn and contemplate the wide field of inspiration offered by the study of these American antiquities.

Mr. Cornejo, after long study and research, has learned not only to adapt, but to infuse the very spirit of their work into modern forms of decoration. He is fortunate to have allied with him and at the head of his Sculpture Department, an artist whose ideals and methods of work are in accord with his own, a sculptor whose modern interpretation of his subject has all the feeling and decorative strength of the primitive artist. Some statues and busts, modeled with fineness of touch combined with strength, are a striking proof of his talent. Articles of luxury and utility decorated with ancient American designs, all having a unique and original character, and models showing the possibilities of this art applied to modern decoration are also shown.

Mr. Cornejo has been tireless in his efforts to induce the public to take an interest in this movement, and his exhibitions and talks to the different clubs, teachers and artists of California have proven the sincerity of his ideals. One of his recent works and one which is spreading his message throughout the land, is the Toltec Dance Drama "Xochitl," produced by the Denis-Shawn Studio. It creates a deep impression on all who see it. The subdued splendor of the coloring, the strange exotic beauty of the decorations and costumes, combined with the grace of the dancers, make this act one of the most harmonious and unique in character on the American stage.

To carry out his ideals and to illustrate them more graphically, he planned that the large room in the studio should be the apex of the whole decorative scheme. This room he calls the Temple of the Sun, and his motive was to impress one with all the strength and force combined with line and color to be found in Aztec and Mayan art. This is felt immediately upon entering the room. The subdued lighting effects, the richly harmonious color schemes and subtle combinations, interposed with symbolic designs, all have a solemn influence. The main motive is the famous Aztec calendar stone, reproduced for the first time in its original colors. This combined with the unique furniture, hangings and rugs, all show the artist's fine use of color design and proportion.

Let us hope that the artists and decorators of today will take a deeper interest in the encouragement and development of this movement, as it is likely to form the impetus for a genuine renaissance in American Arts and Crafts.



OF ALL MONUMENTS ERECTED ON THE CONTINENT NONE EQUAL FOR ITS CONCEPTION OF BEAUTY AND PURITY OF ABORIGINAL AMERICAN MOTIFS THAT DEDICATED TO THE LAST AZTEC EMPEROR IN THE CITY OF MEXICO. IT IS THE WORK OF A MEXICAN ARCHITECT AND A SCULPTOR

BORDER OF THE GALLERY AT THE AZTEC STUDIO SHOWING A GREAT VARIETY OF OBJECTS. NOTICE THE CARVED CHAIR, ITS MASSIVE FORM IS DERIVED FROM AN AZTEC TEMPLE. THE PAINTED FRIEZE IN THE UPPER LEFT IS TAKEN FROM THE STONE OF SACRIFICE

OBJECTS OF UTILITY CARVED AND COLORED WITH PRIMITIVE MOTIFS DESIGNED BY CORNEJO. THE KNIGHT OF THE EAGLE, AN AZTEC MASTERPIECE IN SCULPTURE, IS ADAPTED TO A BOOK END. POTTERY WITH CLASSIC AZTEC ORNAMENTS IS BEING PRODUCED BY THE NATIVES OF GUADALAJARA

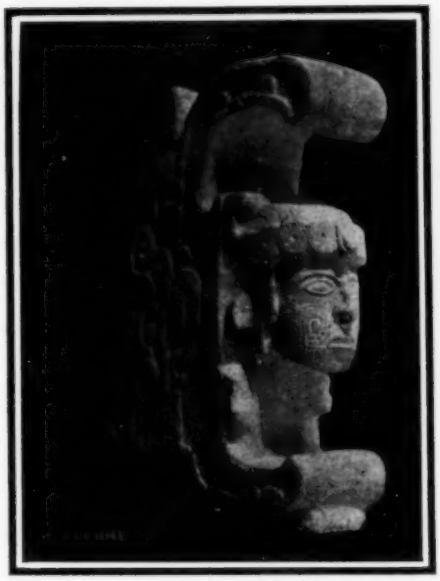
CORNEJO'S UNIQUE ROOM KNOWN AS THE TEMPLE OF THE SUN, ILLUSTRATES WITH FORM, COLOR AND LINE THE VIRILE STRENGTH OF AZTEC DECORATIVE ART IN A MODERN ARRANGEMENT. THE CALENDAR STONE IN COLOR IS THE MAIN MOTIF

"THE OFFERING"

A REMARKABLE DECORATIVE PANEL ILLUSTRATING ONE OF CORNEJO'S ARRANGEMENTS. AFTER THE FAMOUS TABLETS FROM PALENQUE, CARVED IN WOOD BY AN ARTIST OF AZTEC DESCENT

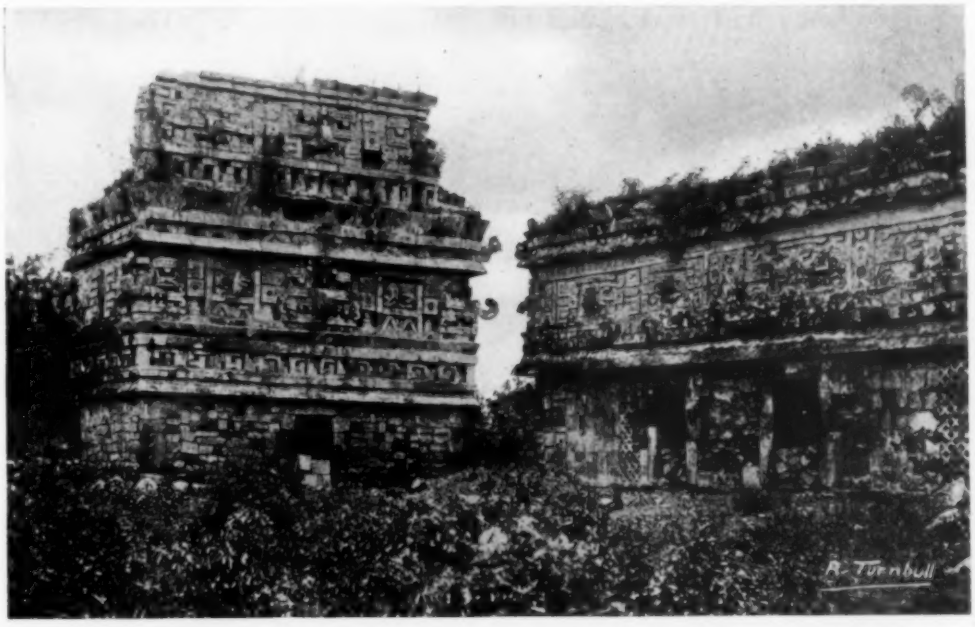
A MAYAN MEDALLION. THE FIGURE IS ENCIRCLED WITH A BORDER OF DECORATIVE GLYPHS. FROM CORNEJO'S COLLECTION OF REPLICAS

MODERN TILES INFLUENCED WITH MAYAN ART, EXECUTED AT THE AZTEC STUDIO OF MANUEL CENTURION

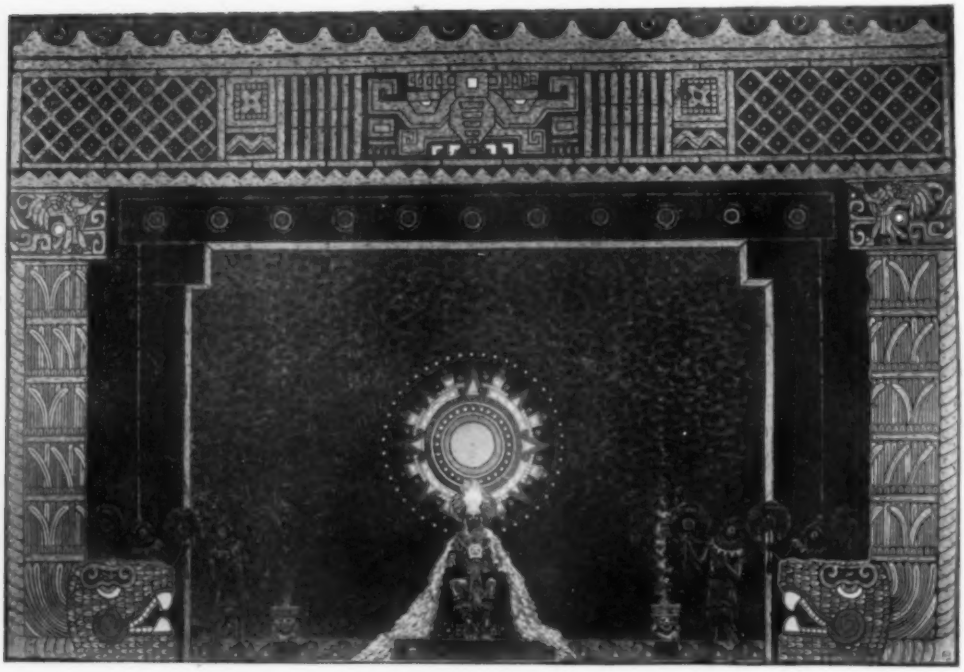


A BEAUTIFUL MAYAN SCULPTURE FROM A FACADE ORNAMENT OF ONE OF THE BUILDINGS IN YUCATAN

A MODERN INTERPRETATION OF A MAYAN CHIEF MODELED AT THE AZTEC STUDIO BY M. CENTURION



THE RUINS OF CHICHENITZA IN YUCATAN, MEXICO, WERE BUILT BY THE MAYANS AT THE HEIGHT OF THEIR CIVILIZATION AND ARE WONDERFUL EXAMPLES OF ABORIGINAL AMERICAN ARCHITECTURE



MODERN STAGE SETTING DESIGNED BY FRANCISCO CORNEJO FOR THE TOLTEC DRAMA "XOCHITL" PRODUCED BY THE DENIS-SHAWN STUDIOS. THE ORNAMENTATIONS ON THIS SET IS DERIVED MOSTLY FROM THE MAYAN ART. A COLORFUL SUN SYMBOL IS THE POINT OF ATTRACTION

STRIKING DESIGN FROM A TOLTEC SACRIFICAL BOWL ADAPTED FOR A BATIK ROBE IN THE "XOCHITL" BALLET

School Arts Magazine, March 1921

The Industrial Importance of Art

LOUISE D. TESSIN

DRAWING, correctly taught in the public schools, is one of the greatest factors in the building up of our country's commercial and industrial successes.

How different the demand of today's drawing problems are, compared with those of but a few years ago. The entire system calls for a revolutionizing, and that call, becoming most acute, is being voiced by the rapid expansion and progress of our trade and manufacture.

Art as expressed in beauty, form, line, and proportion, adds greatly to a finished product. That article that bears the most pleasing form, the neatest label, and claims the most attractive advertisement is the best seller on the market, and lessons in art, governing proportion, correct lettering, color and design, should be taught with such practical application in mind. Drawing directed in such lines as these, creates a stimulating interest among the students in the art of the business world that surrounds them, and answers their many queries as to the reason for things taught, and the value of the same.

Design in its many forms bears directly upon the manufacturing problem of such articles as are found in and beautify and enrich our lives.

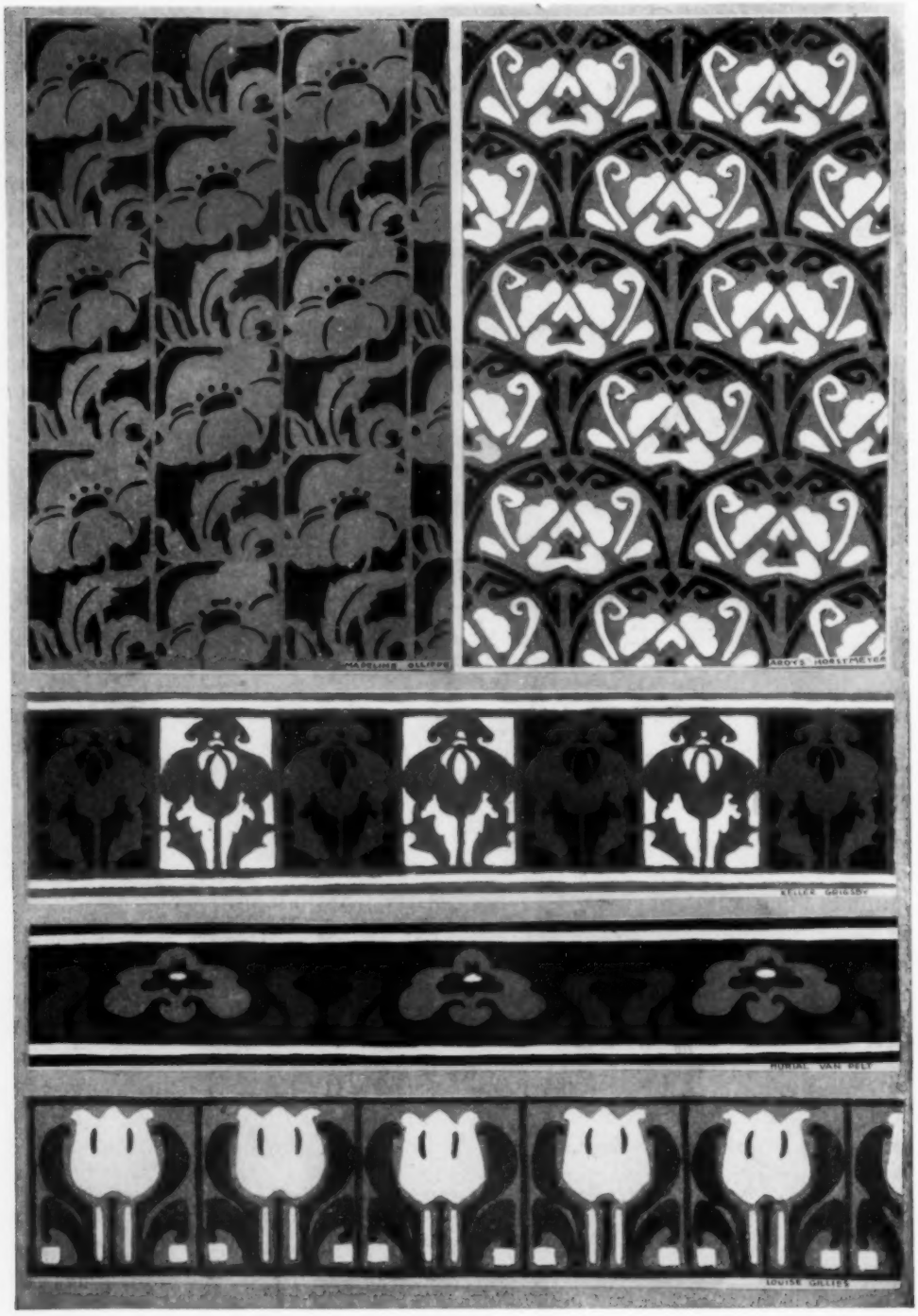
Mechanical art is an essential to every mechanic's education, for all objects of building and manufacture are made from drawings. It is important therefore, that students be taught how to make and read working drawings.

As the student grows up to manhood and surrounds himself with material things, necessities and luxuries—the training he has received in art while at school will guide his selections. It is the early schooling and instruction that will influence him in the choice of the kind of home he will build, the interior decorations, and the garden plans. He understands and knows the kind of advertisement that is best for his business in the newspapers and car cards.

Art from an appreciative standpoint is the great universal language that needs no explanation of word or pen. A good picture tells its story in every tongue. It is the art of the early ages when art was practiced before writing was known,—that gives us the knowledge we have of the conditions and living of the people of the pre-historic times.

Consider just one of the lessons that comes in every regular school course of designing, that of producing an all-over pattern. How very common that problem is in our every day industrial life. Every child should be taught its importance, its many applications, in correlation with art in order that it may understand, recognize, and appreciate the same when confronted with the problem in that outside business world that follows school days.

Your linoleum, carpets, wall papers, and cretonne draperies display carefully planned all-over patterns. Tapestry table covers, damask table linen, also dress materials and then in the



SURFACE PATTERNS DESIGNED BY THE STUDENTS OF THE NAPA HIGH SCHOOL, CALIFORNIA, LOUISE D. TESSIN, TEACHER

library, the book cover linings, besides a score of other things in the home and out that go toward making our living more pleasant and comfortable, are decorated with the same idea.

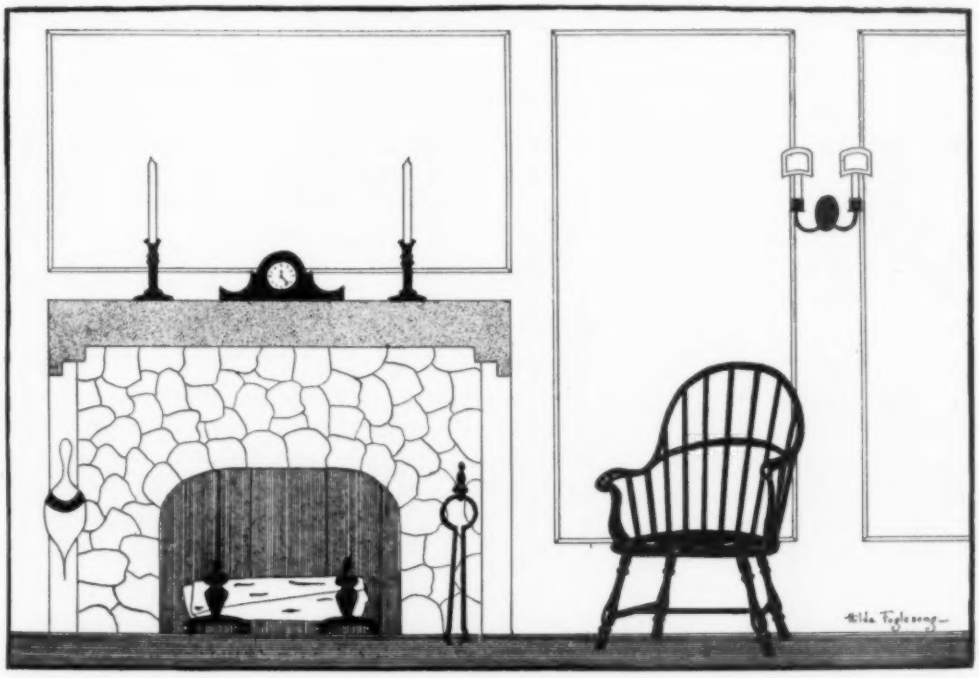
An interesting way to study the work is to plan the design for some given purpose. Decide upon the utility of the article and then upon the method of decorating—stenciling, block printing, or as any textile or material might be printed or woven in the mills.

Appropriate subject matter and color combinations for the design should be considered. Book cover linings should bear upon the subject of the book. Wall paper designs may be planned for high or low rooms, sunny or dark, large or small.

Direct application for many of the designs can be worked out in the handicrafts class on portfolio covers, stenciled table scarfs, pillows, or curtains, or on manual training problems.

The original motif may be planned in a given square, rectangle, oval, circle, or any other form, which in turn is repeated to form the all-over pattern. When produced in colors on colored paper the results are most fascinating.

The borders opposite were designed by students in the handicrafts class for stenciling textiles and decorating such objects as waste baskets, and articles made in the wood-work department.



A LINE RENDERING FOR INTERIOR DECORATION BY HILDA FOGLESONG, LEAD HIGH SCHOOL, SOUTH DAKOTA, GRACE SCHWARZKOPF, TEACHER

An Interesting and Worth While Problem in Industrial Art

RICHARD ERNESTI

EVERY one has use for a number of suitcases or a trunk. Either can be made by the average high school student in manual art work, and this work will prove most acceptable as a problem in school or out of school in the home shop.

Not only can it be produced at less than the average store price, but the general character of interior or utilitarian service may be improved upon to suit individual needs.

We have worked out the problem in a number of ways:

To follow the regulation way of factory production it is perhaps best to use a cardboard foundation after having determined upon the size of case wanted. Make the lower body and top each separately, join the corners with some good tough paper, pasting carefully. Now, after the strips pasted are dry, the upper edges (about 1″ to 1½″) of the main body or lower part of the case are bent inward in such a way as to allow the cover to slip over easily, perfectly and with a good tight fit, always considering that the top and lower body both will be covered with some material.

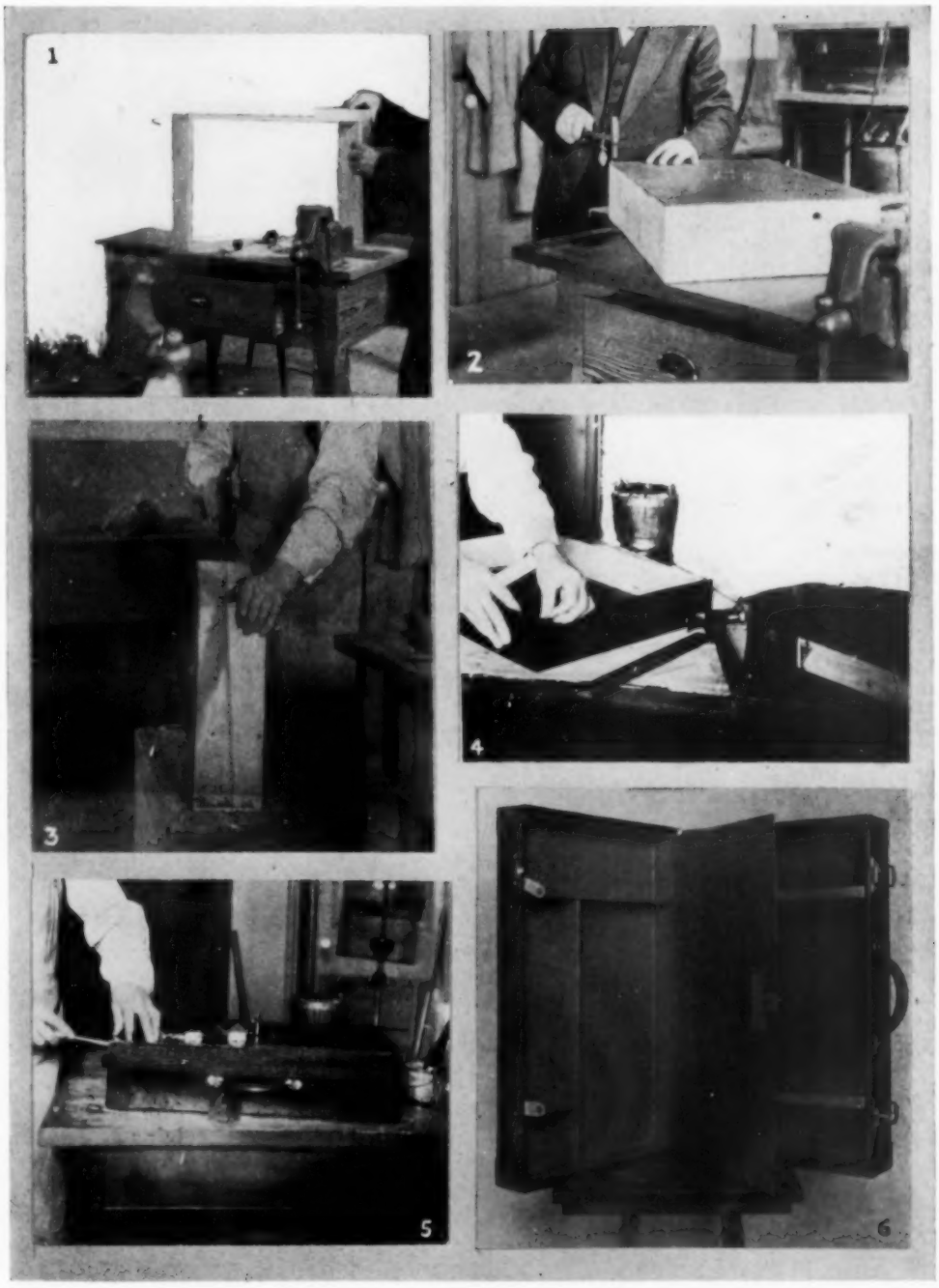
The bending in of that upper edge just right is quite a trick, and in most cases it is advisable to bend the edges before pasting, unless the workman has had experience in this line. If a tinshop is handy it is easy to bend the cardboard into shape on the folder. If we are going to hinge the box and the cover as ought to be done, so that hinges should be covered by the cloth or leather or whatever material is to be used as an outer covering, we can proceed in two ways.

We can either hinge the cover onto body of case before covering is done; or we can slip the hinge under cover of top and main body after we have put on the outside material. Perhaps for beginners, the easiest way is to cover each part separately, then when paste has dried thoroughly, cut a slit for hinge, slip it under cover material, fasten hinges with slotted rivets, then place cover on main body of suitcase and mark for the slits to be cut to place the hinges. Slip them into place, perforate or make holes for the rivets while top sits properly on the lower part, and proceed with the slot rivets as before.

You will find these rivets strong enough for the service they are expected to give, if properly bent, and tightened on the inside of the suitcase.

Care must be taken, of course, in the process of covering, to see that corners are well fitted and overlapped properly so as to make them water and dust proof; and since glue had best be used for the pasting of cover, if it is heavy material, see that it sticks well. Here the experienced teacher can be of great assistance to the enthusiastic worker.

Size in three dimensions having been settled, the matter of the depth of cover is of importance as leather corners must



PROGRESSIVE STEPS IN THE MAKING OF A SUITCASE AS DESCRIBED BY MR. ERNESTI IN THE ACCOMPANYING ARTICLE

NO. 7

NO. 8

be placed. The latter are also fastened with the same kind of rivets. These corners or kneecaps can be obtained in different sizes and colors to fit deeper or more shallow tops. In case a shallow top is used the same size corner should be used on the lower body of suitcase.

The locks and catches are placed last and a great variety of locks can be had for the asking. The style shown in illustration No. 7 is perhaps the most suitable article for the purpose and as safe as any lock on the average commercial suitcase.

If especial strength in the suitcase is desired and the increase in weight of a few ounces not matter, the corner-sides may be covered with leather strips matching the corners and these should be fastened with the small-headed slot rivets.

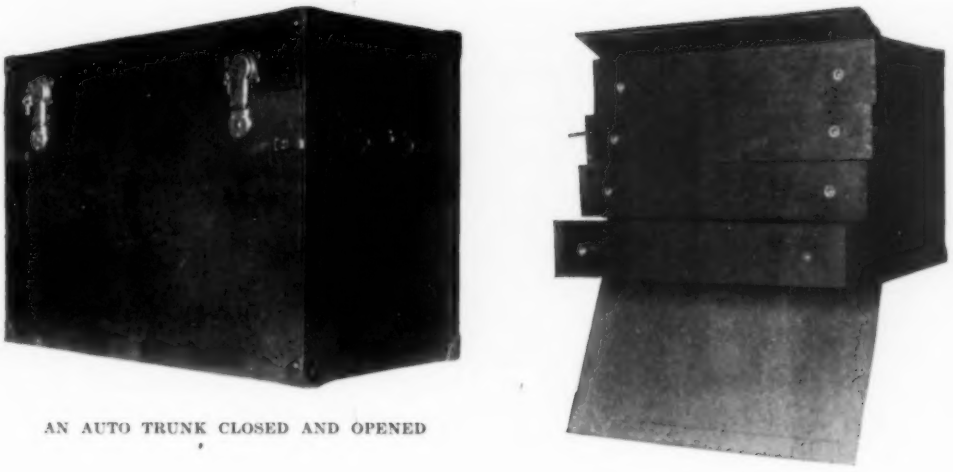
These same rivets will also serve very well for the fastening of the locks; regular rivets may be used if desired.

The lining of the suitcase too can be selected from a variety of materials. From leather to skiver, or fabrikoit in thinner style or even the hundreds of styles of bookbinders' cloth, give perfect service and are easily handled, especially by those who already have done some work in bookbinding, and who have learned to handle both paste and glue at the proper moment and in the proper way.

In illustrations Nos. 1, 2, 3, 4, 5, are shown successive steps of making the body of suitcase shown completed and standing on end in illustration No. 6. In this case the sides and ends were made of thin light wood, top and bottom of card-board as shown in illustration No. 2. The division within the suitcase is a little different from the usual and similar to the Gladstone Bag in dividing evenly both sides of the case, providing one side for clothing alone and the other side with extra cover for haberdashery and small toilet articles.

Illustration No. 8. shows a suitcase made in the way explained in this article in the first description, it has leather corners and is covered with a good quality of fabrikoit, lined with skiver.

Illustration No. 9 shows an auto trunk to be carried in rear of car for an overland trip. Note its simple way of



AN AUTO TRUNK CLOSED AND OPENED

opening and how useful such drawers would be. The trunk also can be checked on trains and can easily be removed to room in hotel in case of stop-overs.

Materials used in these problems were obtained from the DuPond Co., in Delaware. Their fabrikoit is unexcelled. Or Chase and Company, in Boston, Mass., can also supply these materials, especially good cover materials. Gane Brothers & Co. in Chicago or New York will supply you with any weight of cardboard you may wish to employ, and will also furnish to you the linings of all sorts mentioned. Hardware can be obtained from the Brianard Manufacturing Co., in Rochester, N. Y., or from some jobber in trunk hardware.

HE WHO HAS LEARNED TO LOVE AN ART OR SCIENCE HAS WISELY LAID UP RICHES AGAINST THE DAY OF RICHES; IF PROSPERITY COME, HE WILL NOT ENTER POOR INTO HIS INHERITANCE; HE WILL NOT SLUMBER AND FORGET HIMSELF IN THE LAP OF MONEY, OR SPEND HIS HOURS IN COUNTING IDLE TREASURES, BUT BE UP AND BRISKLY DOING.

Robert Louis Stevenson

Editorial Viewpoint

The Cuckoo Bird in American Design

AMERICA has been termed the "Melting Pot." Those living in all parts of the earth turn to America for freedom and progress; the opportunity to develop individuality of thought and sensible action. The swarthy craftsman from Italy with gay colored kerchief and ear-rings as adornment; the peasant with bloomer trousers and wooden shoes; the emigrant from northern Europe with quaint head dress and quainter baggage all disappear after a few weeks sojourn in the land beyond the Statue of Liberty, and in their place a group of embryo citizens, less picturesque perhaps, but fitter subjects for Americanization are created. And in this process the Great Melting Pot recreates individuals to fit a new land, a new mode of living which produces new environment, and a race of descendants whose whole thought is for American ideals.

But the one importation from abroad that has skipped the Melting Pot is that of design. A false halo has surrounded the designs of Europe and we are everywhere trammeled with foolish re-adaptations of motifs from France and from Germany, from the Orient and from the Northern countries, with no thought of the eternal fitness of things. Because some building looks well on the Rhine or because some doorway looked artistic in Spain, or because peasant motifs were well adapted in Germany is no reason that they are the thing most appropriate for the American industries.

With the wide interest in Industrial Art, we stand in grave danger of becoming involved in a worse muddle than ever. It is far safer ground to start from if we have no design, than if we are chained to a mass of conglomerated design. With the imperative need of designs being created at home, museums and schools have hastily turned to answering the manufacturers' urgent need. But have they answered it wisely? It will be a national catastrophe in American art, if the whole machinery of art education and art vocations is focused upon deluging the country with the same lack-of-art products we have always had. It is a well known fact that Europe for decades foisted the riff-raff of their products upon American buyers, for the impression was that anything that was European was well paid for by the gullible American. And now that we are creating American design we are well content and pat ourselves on the back if we turn out designs or materials near good as these European goods. We rush to a Museum, the attendant shows us a textile made in Italy. *It is very old; it is very expensive; it is from abroad.* Three wonderfully false standards to judge beauty and fitness for reproduction of any material in our land. *Age* and *expense* and *source* have nothing to do with art adaptation to our environment, but it is so hard to break away from long respected, erroneous art standards. People enter Museums and are awed by the great value of an object, or by the great age of the subject, or by the great fatiguing detail of the handicraft. When will they be taught and be awed into respect for the great, simple beauty of the subject whether it was unearthed from the earliest dynasty of Egypt or produced by the local pottery? When will the textile factories stop turning out rubber-stamp repeats of Russian or Chinese motifs, or the furniture factories to turn out forests of Chippendale and other dead and gone periods that

are supposed to be the only backgrounds for American homes? When will the schoolrooms of the whole country decide that an original design course of instruction though crude in the beginning is far superior to a least-resistance course of copying Austrian, or European peasant design? This will all commence to be corrected when the European Cuckoo Bird of Design is recognized and eliminated from the American Nest of Art Education.

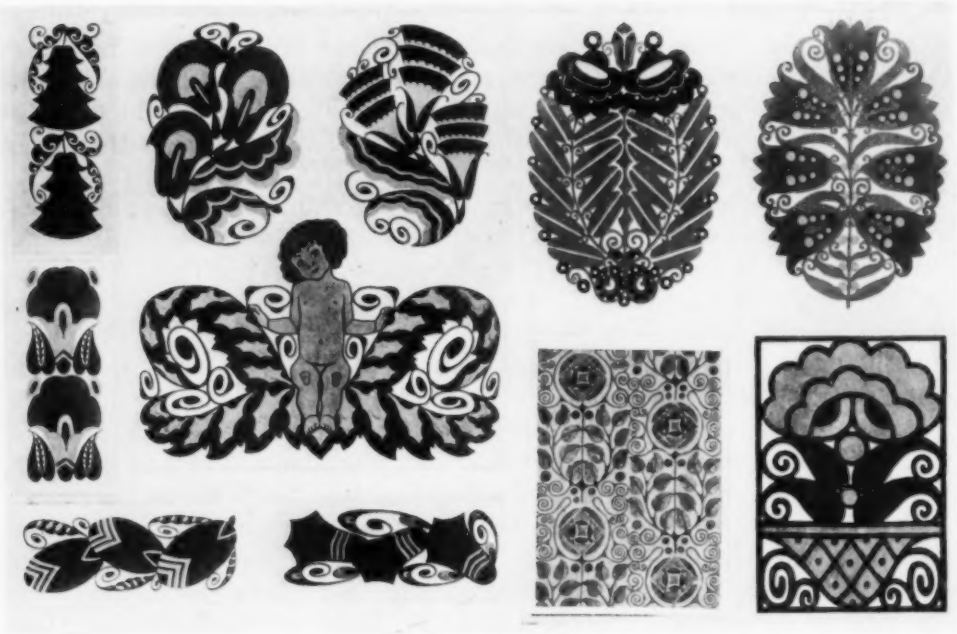
We are told and impressed that design has been so refined by ages in Europe that we cannot hope to equal in a life time the things there produced. We are told that heaven forbid that American design be produced overnight and therefore to come and copy from the Museums for our homes what the brains of someone else have produced consistently for some place else. We are told that it is much better for students to copy well the motifs of some other country than to make poor designs of their own; all of which is the Song of the Cuckoo Bird. I cannot see the reasoning in the eternal copying of other's styles. I confess that I have more respect for the beginner's clumsy honest beginning in designing from nature than the fluent, copy-cat expressions of schools from designs of another land. We are big enough, intelligent enough; we have the flora and fauna, the history and traditions to back up a wonderful American design; let's be American in our design to the very core.

We think of Art too much in terms of dollars. We have a group of industries who measure designs only by how fast they sell. Time will eliminate this. Time will show that there is a less visible but greater value to handicrafts, a value of keen pleasure to the inner eye, the great peace of content to the soul that comes with the possession of an object of beauty through its remarkable assembly of line, form and color that far surpasses the satisfaction of having secured an imitation vase marked down from twenty-five dollars to nineteen dollars and ninety-eight cents. Time will add many more American industries to the few now existing who are turning out goods on the basis of not how many but how good. Time will help the community to see and the schools to ask and the teacher to stimulate the students toward honest, individual expression of the things in nature around them to the beautifying of all things they may make; that in time the Industrial Art of our land will be truly American in design and not mere echoes of things produced as expressions of another people with different ideals in crumbling countries. This time can be hastened by the American Art Teacher.

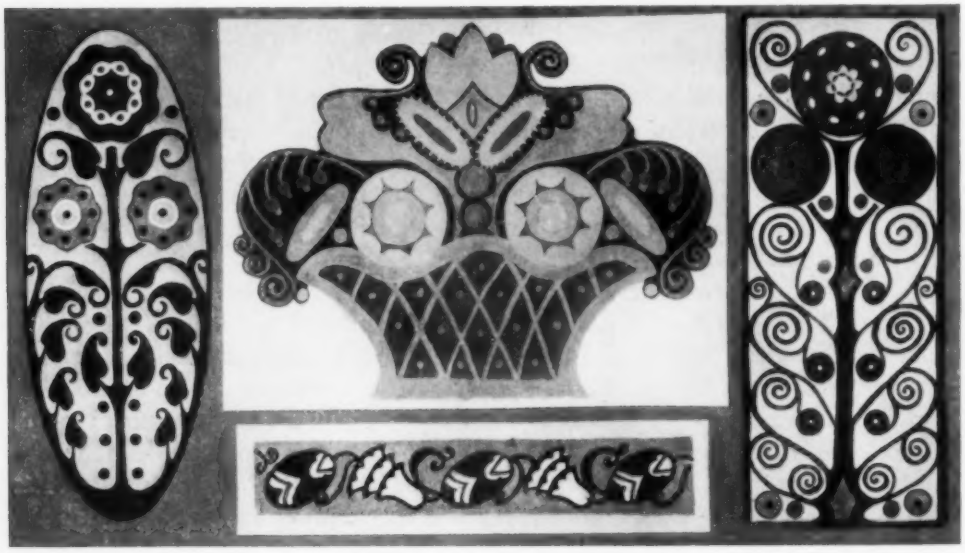
Teachers must discern between the true and counterfeit design. Thankful we must be that schools like Teachers College at Columbia, Pratt Institute, Newcomb College, Cleveland School of Art, the Pennsylvania Schools, and others have demonstrated that a strong, virile design with no European trends can be produced; that the student can be guided to beautiful expression of his own, and that the only purpose of historic design is that of comparison and not of copying. The teacher must know that the instructor or school which persists in presenting Austrian, German, French or Moorish designs and calls them American designs is a Cuckoo Bird and when the egg is hatched the student finds himself trammeled and crowded, his time wasted because of a design unrelated to American thought.

Have you a Cuckoo Bird course in your school? Replace it with the American Eagle of Design this next term and avoid the Cuckoo Bird instructors of design when planning your summer session studies.

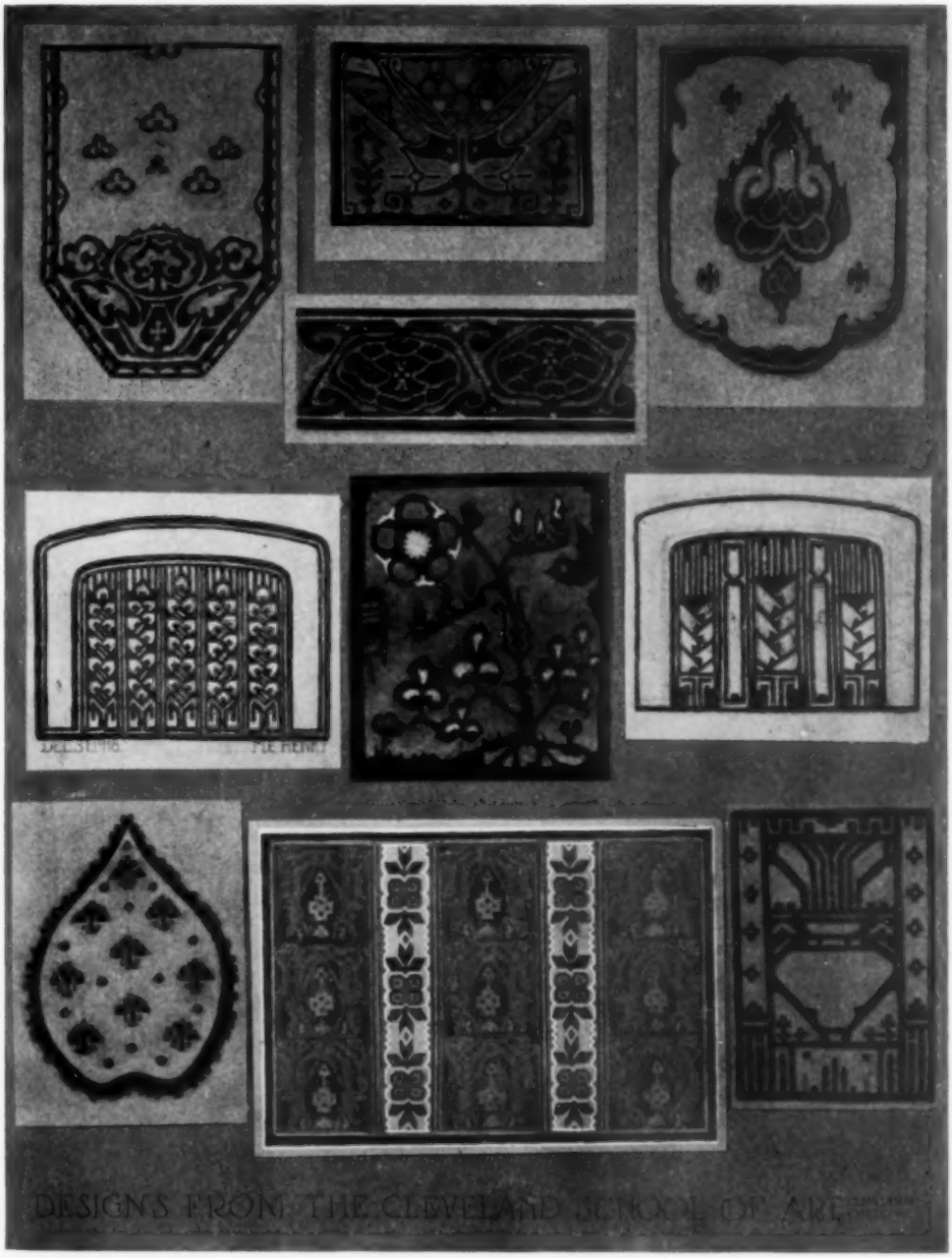
DECORATIVE ARRANGEMENT 38 GERMAN DESIGN



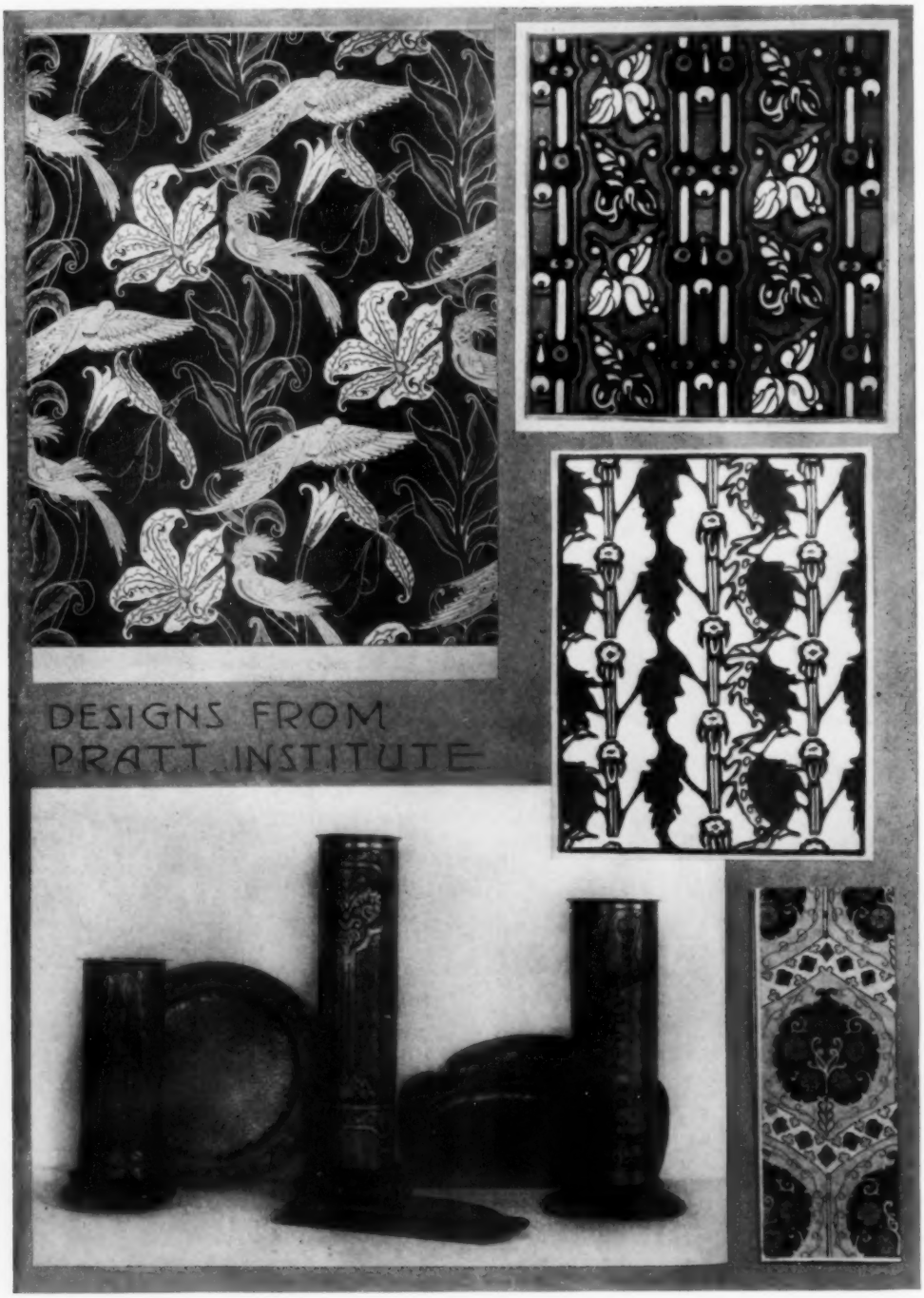
SOME TEACHERS THINK THIS FORM OF DESIGN HAS BEEN DEVELOPED IN AMERICA, BUT IT HAS COME FROM GERMANY OR AUSTRIA; AND IS OUR GREATEST FORM OF CUCKOO BIRD DESIGN, HAVING SUPPLANTED AMERICAN INDIVIDUALITY AND ROBBED TEACHERS AND STUDENTS OF ORIGINAL CREATIVE ABILITY IN MANY COMMUNITIES



THESE DESIGNS WERE MADE BY STUDENTS WHOSE TEACHER TOLD THEM THAT THEY WERE PRODUCING AMERICAN DESIGNS. HOWEVER, THE PROPER CLASSIFICATION IS GIVEN AT THE TOP OF THE PAGE



STUDENTS' DESIGNS MADE UNDER THE DIRECTION OF MR. RAYMOND P. ENSIGN, THAT COMBINE STRENGTH WITH BEAUTY AND HAVE NOT SACRIFICED INDIVIDUAL EXPRESSION IN THEIR DEVELOPMENT



STUDENT DESIGNS AND APPLICATIONS MADE BY THE CLASSES AT PRATT INSTITUTE, BROOKLYN. THESE DESIGNS EQUAL THE ENRICHMENT OF ORIENTAL MOTIFS BUT ARE ORIGINAL IN EXPRESSION AND PREFECTLY HARMONIOUS TO AMERICAN NEEDS

DESIGNS DEVELOPED BY STUDENTS OF NEWCOMB COLLEGE FROM NATURE FORMS IN THEIR NEIGHBORHOOD. THE LOTUS AND MAGNOLIA, THE FIG, PINE, PALM, AND ORANGE, THE ALLIGATOR AND BAT HAVE BEEN USED. NO CUCKOO DESIGNS EXIST AT NEWCOMB COLLEGE

To the Point

Short articles on current school art subjects are requested for this department. They must be brief, helpful, constructively critical, and "to the point."

ART AS ART

THERE are some persons who think that painting and sculpture are all there is in art worth considering. If that were so I might as well stop right here, because the fewer statues there are on furniture and the fewer pictures there are on carpets and hangings the better.

I hesitate very much to speak of "Historic Styles" and "Period Furniture," because these terms are used so constantly to condone atrocities and to deceive the credulous. It seems to be generally thought that any architect or interior decorator is entirely justified in copying any famous room of the past and making his client live in it whether he feels at home or not. In our teaching in these courses we have always insisted that the only use that you are justified in making of the past is to ascertain how certain effects can be produced which are harmonious with certain types of character, and that home building is the creation of appropriate environments for certain specific individual lives. You have got to act out the character that you are trying to express. Now, there are many people on the stage today whose personality is the same no matter what the play is. They may be great elocutionists, but they are poor actors. The actor or the interior decorator is the greatest artist when the audience loses his own personality and sees only the superb portrayal of the character that he has temporarily assumed. That is the function of the interior decorator and the architect—to act out the character that they are trying to express.

There are three ways in which you can promote art in commerce. You can educate the taste of the general public, you can introduce a lot of art students into the industries, or you can teach the leaders of those industries, the people already engaged in the trades. There has been a tremendous advance in teaching the boys and girls in our schools, even in our kindergartens, the correct principles of color and form, and I doubt if we can over-estimate the great power that this is going to have in uplifting the general taste of the public in the future. But you will pardon me if I protest most strongly against the half-digested knowledge which is so commonly taught as the principles of domestic science. To illustrate my meaning: Our firm received a request from a large school of excellent standing for an opportunity to obtain data for a course in domestic science. I made the appointment myself, and at the time fixed a young lady appeared with a notebook and a lot of questions. I did my best to answer each one of these with the constan warning that my answer was to that specific question and was not a principle of general applicat tion. After about half an hour of this I learned to my horror that she was only getting informa-- tion from which another was to work out a lecture, which was to be given to still others and they in turn were to pass on this information again to other classes. When I thought of the ultimate consumers of this thrice perverted information I could only echo the words of Josh Billings: "It ain't my ignorance that worries me as much as knowing so many things that ain't so." That is not an exceptional incident.

It is reported that people are not interested in art as art. I confess I agree with the people. I am not interested in art as art. But when you get art as applied to things we use in everyday life, then everybody in this country is interested, and there are tremendous possibilities in just such

education. I care not where it is given so long as it is given. I don't know whether you realize it or not, but the salesmen in our stores have more power in influencing the public taste than all the art teachers in this country, and if you give this vocational training to them you give every man and woman in the trades a new vision of life. With such training the printer will think out how he can space properly the common advertisement; the girl behind the counter will think out how she can sell material to a customer that will make the customer not attractive because bizarre, but attractive because beautiful. And everybody who has to do with the furnishing of a home will realize that they are creating an environment, and will study out how they can so make it that it will force out the best traits in the character of the men and women who are to reflect that environment. In short, what we are driving at is simply this: that every man and woman in the trades of this country shall have a working knowledge of the fundamental principles which underlie their daily tasks, so that they can intelligently and joyfully think out their job as it should be in a world of things as they are.—WILLIAM SLOANE COFFIN.

THE UNIMPORTANCE OF IMPORTED ART

"Improper teaching in the past has led to much misunderstanding in regard to industrial art. Just as our picture dealers have over-emphasized the importance of imported pictures, so have many of our merchants lauded the superiority of imported designs. Praise has been given to the foreigner, but little to our own home talent. The imported article has been advertised until a fictitious value has attached to the fact that it was designed abroad. Thus the public has received an idea that a power exists in the foreigner that cannot be cultivated in our home talent. We have the talent and we have the market, but our talent needs training, and it cannot secure this until schools exist to give it.

* * *

"The question, as a whole, is as plain as it is imminent. With the signing of the treaty of peace, there will be a rush on the part of merchants the world over to secure new markets and re-establish old ones. Manifold millions in profits are at stake, for the industrial arts show the very highest rate of return upon the investment in raw material. The clever designer multiplies the value of the product into which his design goes from a hundredfold to a thousandfold. Why should we, in America, not enjoy this profit? If we fail to do so, it is only because we fail to read the lesson writ large in the industrial art school, as it exists in every industrial nation but our own."

GOVERNMENT SUPPORT FOR THE INDUSTRIAL ART SCHOOL

"For the support of the industrial art school, different agents are needed. Part of the support will undoubtedly come from the city, but part may also be secured from the state. Massachusetts has for many years carried forward a Normal School of Art with state funds, and Pennsylvania a school of textile working and of industrial design under similar auspices. In addition, the United States Government now is free, through the Smith-Hughes law, to appropriate money for vocational education. Education in the industrial arts is unquestionably one form of training which is contemplated under this act. Thus the Government should be called upon to support the industrial art school.

"Liberal support for the school is essential. Those of marked talent are not many, and on no account should success be estimated in numbers. The true estimate is in the work produced. This should be of the highest standard. To secure this work, good teachers will be needed and much personal teaching. This cannot be done in large groups.

"We have still to learn the lesson long since learned abroad, that good industrial designers cost money to produce, but that it is to the state's interest to invest its money in their production. The return upon the investment is manifold."

—FRANK P. HANEY

Good Ideas from Everywhere

TEACHERS EVERYWHERE ARE INVITED TO SEND IN ORIGINAL IDEAS AND ALPHABETICON MATERIAL FOR THIS DEPARTMENT. THE EDITOR IS GLAD TO CONSIDER ANYTHING SUBMITTED AND WILL PUBLISH IT IF POSSIBLE. HELPS FOR THE GRADE TEACHERS ARE ESPECIALLY DESIRED

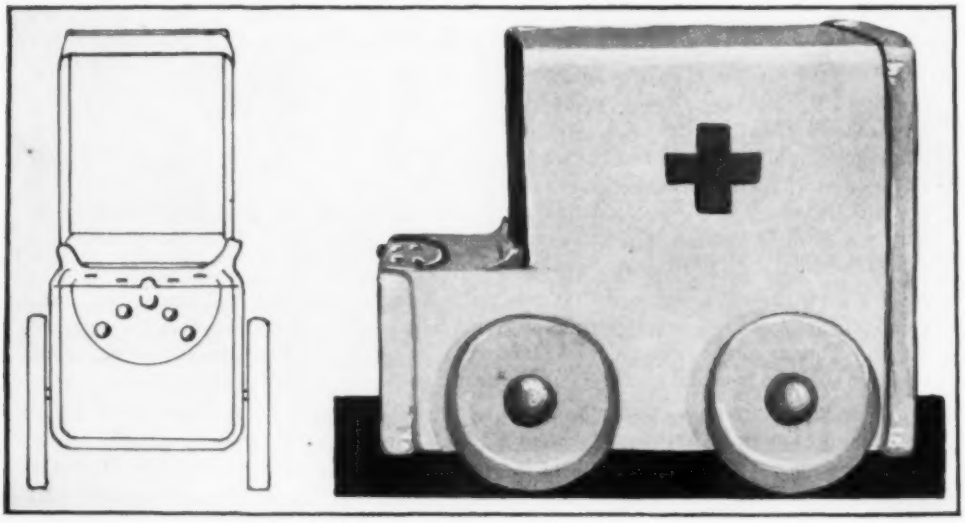
HENRY FORD OUTDONE. A rural school art exhibit at the recent Napa County Teacher's Institute displayed many attractive and interesting problems innhandicrafts both in art and sewing.

Although the workmanship on bird houses and toys constructed of wood, card-board garages, clay animals, and paper birds and butterflies, was unusual, it was unanimously voted that the cinnamon can ambulance was the most unique. The inventor, Adair Burton, thirteen years old, when asked as to the materials used, replied that the can made up the body of the ambulance, and the lid, with its tiny perforations, was cut and bent to make the radiator and hood. A piece of wood, the length and thickness of the can was wedged into the body. Over this the radiator was placed, and the wheels, the tin lids off of Borden's milk cans were nailed to the body with brass tacks. The red crosses were cut of red paper and glued on, and, "It's an ambulance that goes." All credit is due the young inventor. We will expect bigger things from him some day.

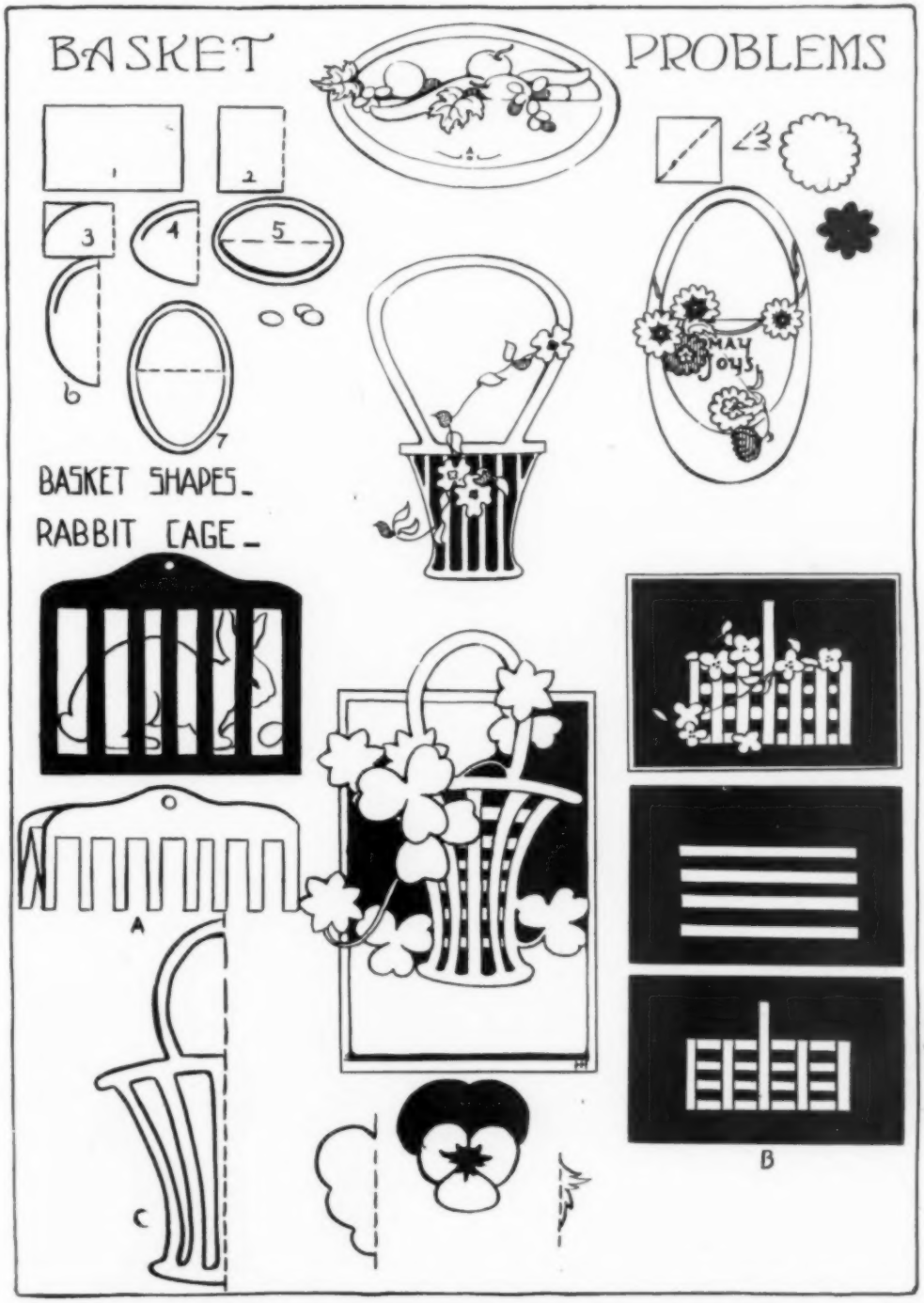
FRUIT BASKETS as a construction problem are shown on a page of this issue. Miss Hope Haupt of Louisiana State Normal accompanies her page of drawings with the following: "After fruit has been studied and its coloring successfully rendered it may be mounted on a basket as suggested in figures 1 to 7. A 9 x 12 inch panel is folded, first the side edges together and then the long way. An ellipse is cut out as in Fig. 3. To make the wide basket, open one fold and slit as indicated in Fig. 4. Open and fold the flap down. To secure the tall, narrow basket, the lengthwise fold is retained and cut as in 6, resulting in 7. The arrangement of the fruit within the basket gives good composition practice; grapes, if used, should be drawn singly and pasted overlapping to give a natural effect.

"Flowers, naturalistic or conventional, may be substituted for fruit.

"The rabbit cage basket is cut from a strip about 2½ x 12 inches in size. Fold short edges together and crease. Next, fold the edges back in the opposite direction, allowing them to extend about ½ inch above the first



A TIN CAN AUTOMOBILE BY ADAIR BURTON, OF NAPA COUNTY, CALIFORNIA



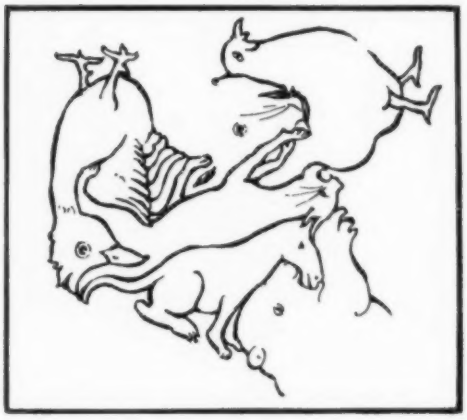
PAPER BASKET PROBLEMS FOR LITTLE FOLKS TO MAKE. DESIGNED AND DRAWN BY HOPE HAUPT, OF THE LOUISIANA STATE NORMAL, NATCHITOCHES, LOUISIANA

crease. Cut out the spaces and top as pictured in A so that bars are formed for each side of the cage. The rabbit is drawn and placed within the cage. He should be so colored as to appear distinctly. This problem is very good for the primary grades.

"Other baskets are formed by pasting a row of strips horizontally with another row on top of them pasted vertically. If the basket is desired 4 inches wide, cut several strips that length and paste horizontally on tinted paper to form a panel; if to be 1½ inches high cut strips that length vertically, allowing one long strip for the handle. Pansies work up well in these problems.

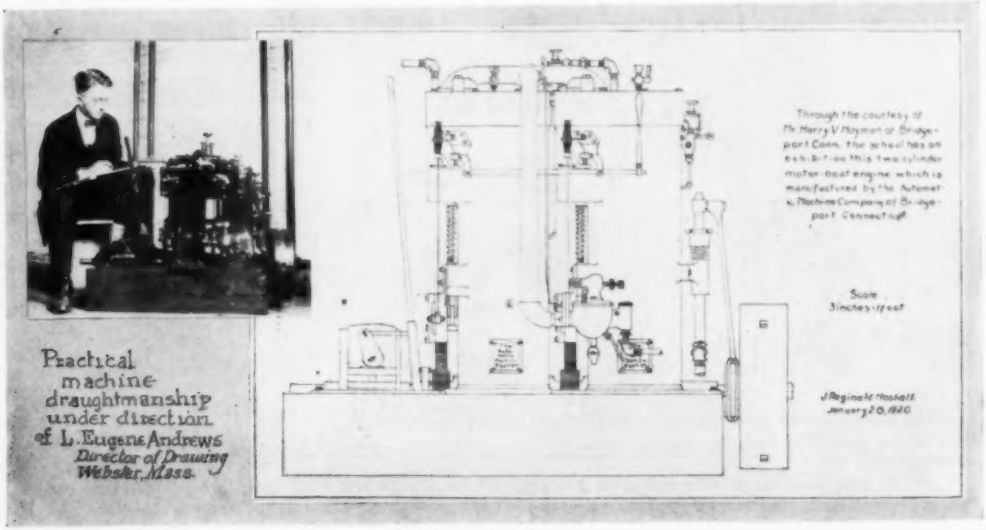
"C is similar to B but more difficult. Straight horizontal strips are pasted into position. Then the basket outline is cut on a fold the openings removed and the pattern mounted on top of the mounted strips."

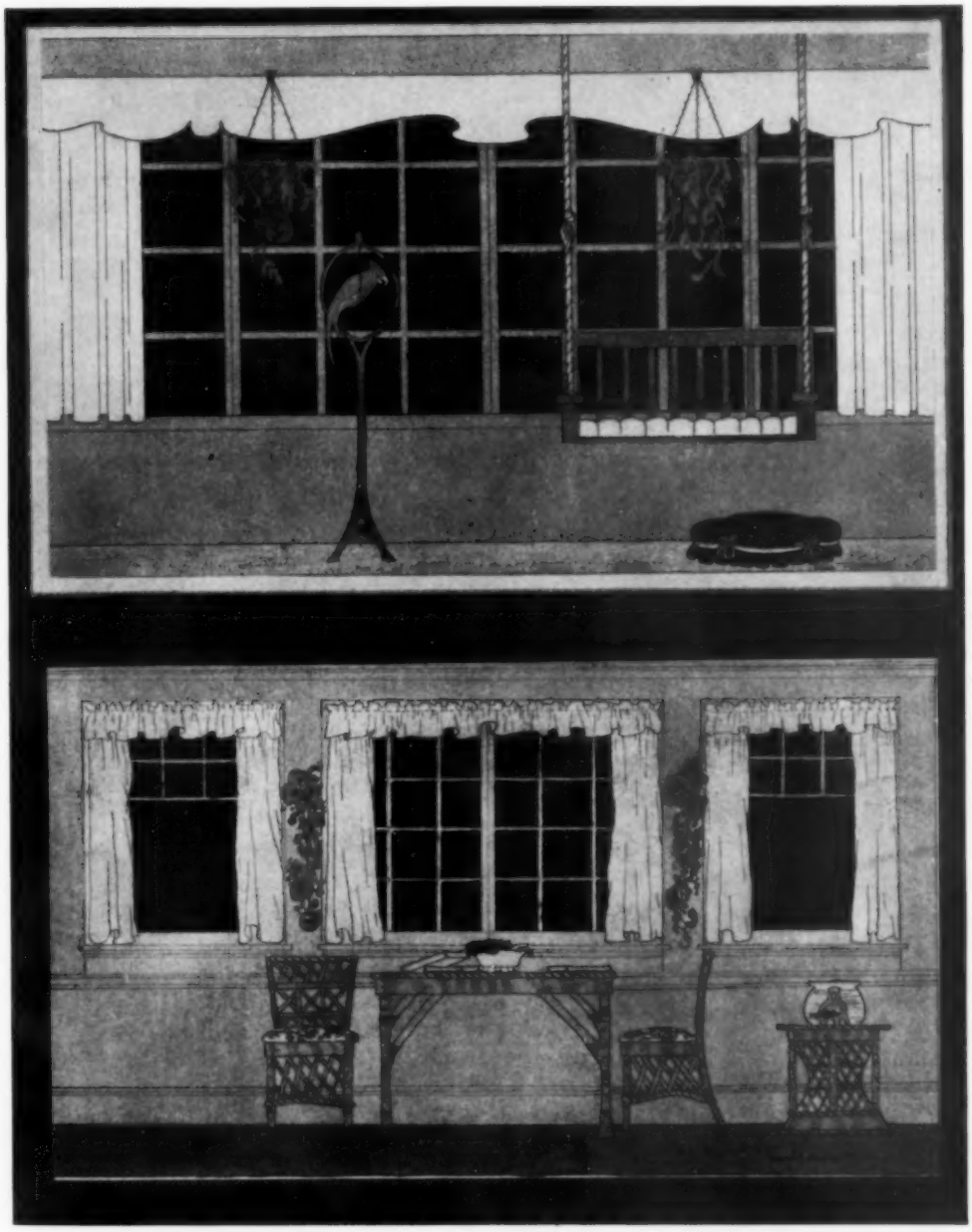
AUTOMOBILE DRAWING is well illustrated by the two pages received from Miss George Eleanor Shaw of Chicopee, Massachusetts. Her Simplified Automobile Drawing for Elementary Grades is described herewith. "The proportions for these drawings were taken from a Cadillac model. Teachers report that this method of giving children an easy start to automobile drawing leads to much observation and many original drawings and interesting adaptions. This problem has been particularly popular because of its appeal to boys."



ANIMAL DRAWING as shown above is a fine imaginative stimulator. This interesting idea excels in connecting interest with art problems. The student who connects the play idea with art will find that the variation recreates and develops ideas. "All work and no play" will make the artist a dull Jack. Stevenson said "No art, it may be said, was ever perfect, and not many noble, that has not been mirthfully conceived." Leaven your serious school problems with an occasional problem of fun.

INTERIOR DECORATION problem is a most important industrial problem and one that can influence the after life of every student. Whether the student will be a professional interior decorator is not the object so much as


Practical machine draughtmanship under direction of L. Eugene Andrews Director of Drawing Webster, Mass.
Through the courtesy of Mr Harry V Hayman of Bridgeport Conn. the school has on exhibition this two cylinder motor boat engine which is manufactured by the Automatic Machine Company of Bridgeport Connecticut
Scale 3 inches = 1 foot
J Reginald Haskell January 20, 1920

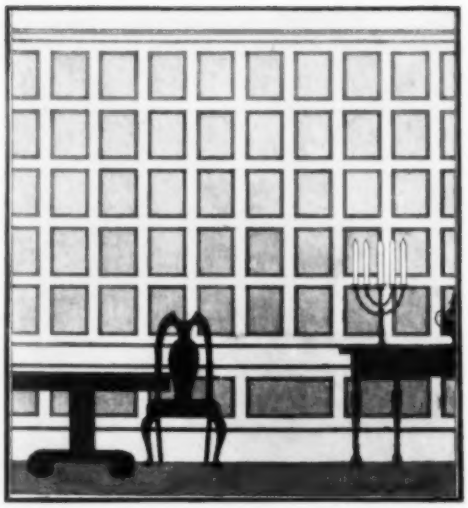


whether he will need the art in bettering his future home surroundings or his business habitation. And such a future is one that few can escape and which can be made brighter and more efficient by good environment.

The engravings above are made from harmoniously colored drawings by the Interior Decoration Class in the High School in Lead, South Dakota, under the supervision of Grace M. Schwarzkopf.

DURABLE TOYS can be made by grade children as an Industrial Art problem that is near to their hearts because it is a need that they can understand. The photograph below was received from Miss Gladys Louise Ambler, Supervisor of Art in Tucumcari, New Mexico, who writes:

"I send you a picture of some of the toys made by the fifth and sixth grade children at 'Four Points' school. These toys have been sawed out of cigar boxes, painted, and shellaced by the children. Each child was required to make a toy from a pattern and after that we had original toys with which results we were greatly pleased. I presented this work before Christmas and for our Municipal Christmas Tree at 'Four Points' school each child in the fifth and sixth grades made a wooden toy which was placed on the tree for the children in the primary department."

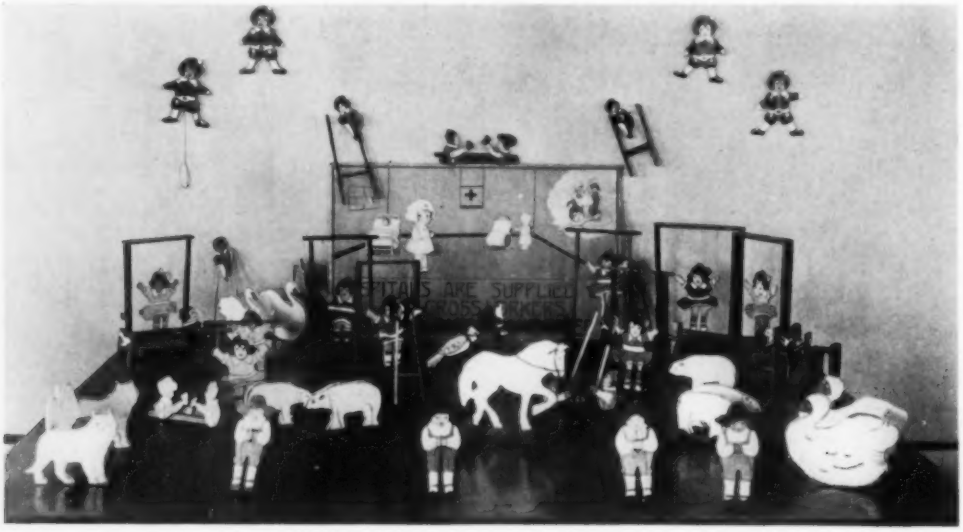


INTERIOR DECORATION BY A STUDENT OF THE HIGH SCHOOL IN LEAD, SOUTH DAKOTA

THE PAGE OF CUT-OUTS illustrating Rubber from Trees to Tires is interesting and Miss Elizabeth M. Yates accompanies the page with this description:

"The cut-out paper pictures illustrate an interesting correlation with sixth grade geography under the New York State Syllabus. It was suggested that world industries was one of the most pertinent topics of the year to illustrate with posters. Of these industries rubber was chosen.

"The class was divided by rows into committees. Each row quickly chose a captain to supervise a poster. The teacher developed



TOYS MADE FROM DISCARDED CIGAR BOXES, BY THE CHILDREN OF TUCUMCARI, NEW MEXICO, UNDER THE SUPERVISION OF GLADYS LOUISE AMBLER

TRUE INDUSTRIAL ART

(1)

Billy speaks—
"My sister Betty has a doll
A kitten and a dolly's set
Of dishes. All she does is play—
I has to do the work, you bet.

"Wif my new hammer
and some nails
I mend some broken fing
or uver.
Us men just has to do the work,
Guess Betty's glad
she has a bruver!

(2)

Betty speaks—
"My little brother thinks that he
Is far superior to me.
But he's so cunning, sweet
and dear
I always love to have him near.
He's playing mend his
hobby-horse
And I act pleased and 'sprised
of course.
My precious little brother! He
Thinks he's grown up
because he's three.

Moral. (3)

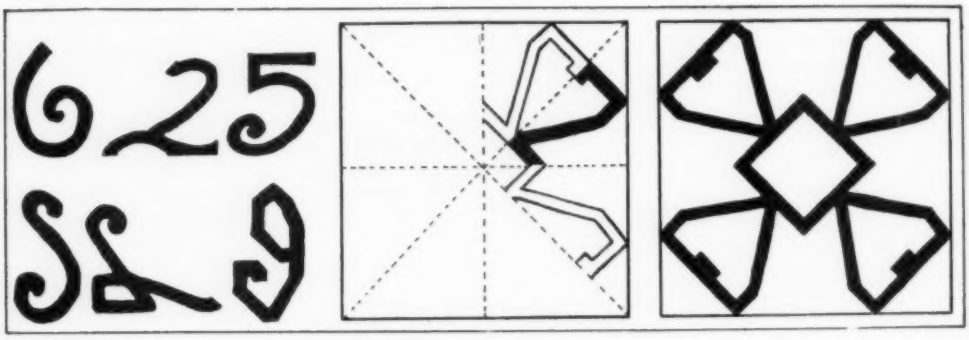
These childish words have a moral true
And the moral, perchance,
will apply to you
Don't be over-proud of your work. No
perhaps
Your veiw is not the other chap's
Try too, to see his worth and merit
And cultivate a happy spirit.
And if you're sure your industry
Is first and best — have harmony!
Use Betty's tact and play your part,
Then you'll know what means
..... INDUSTRIAL ART .....

Betty and Bobby play together
And never disagree
From the time they jump
from their downy beds
Till nurse calls them to tea.

I. Bacheler.

through questioning the various stages in the production of rubber. The items necessary for each picture were suggested by the class and as each was mentioned it was hastily arranged on the board in preliminary sketches by the teacher. In no case were finished drawings by the teacher copied by the class but the pupils were required to search their geographies and all available reference books for suitable photographs.

When book and page were found, assignments were made by the captains to the pupils in the row, according to their ability, some to measure and paste while the more talented endeavored to please their pupil-teachers with drawings of parts planned by the pupil to fit the whole. Perhaps you say the children must have been in an uproar—oh! no—they were too busy. To be sure they consulted their captains but each captain was held



THE ORIGINAL NUMBERS AND LETTERS FROM WHICH THE DESIGNS BY IRMA ADAMS ON THE OPPOSITE PAGE WERE DERIVED

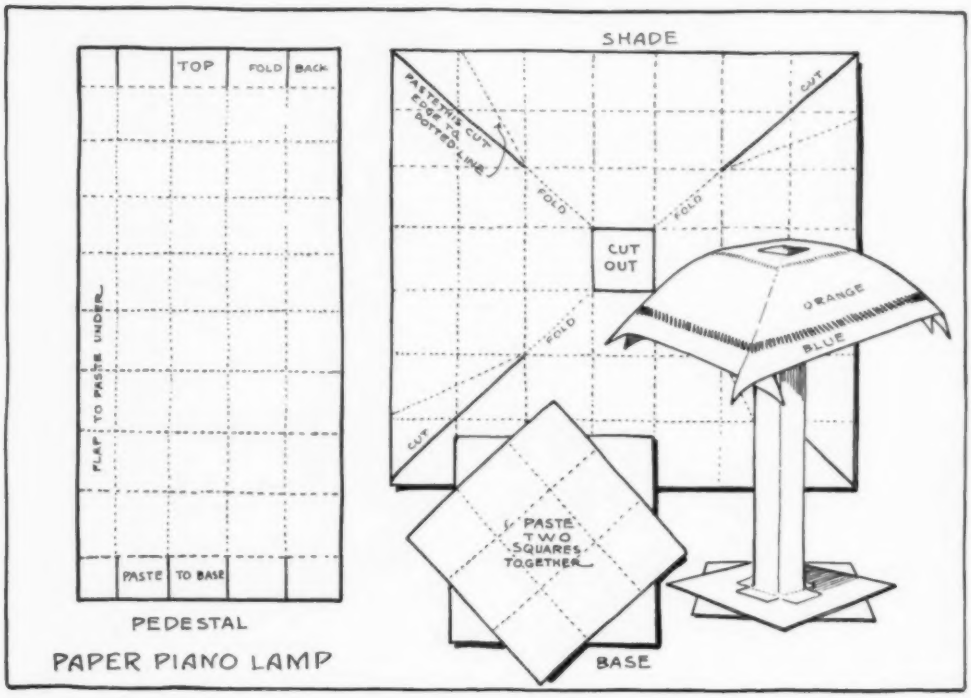
responsible for his row and came to the teacher for advice and colored paper suitable for his needs.

The keen interest in the search for material reflected a new attitude toward books as a source of pleasure, and the critical attitude of their fellow pupils stimulated many re-drawings of difficult parts.

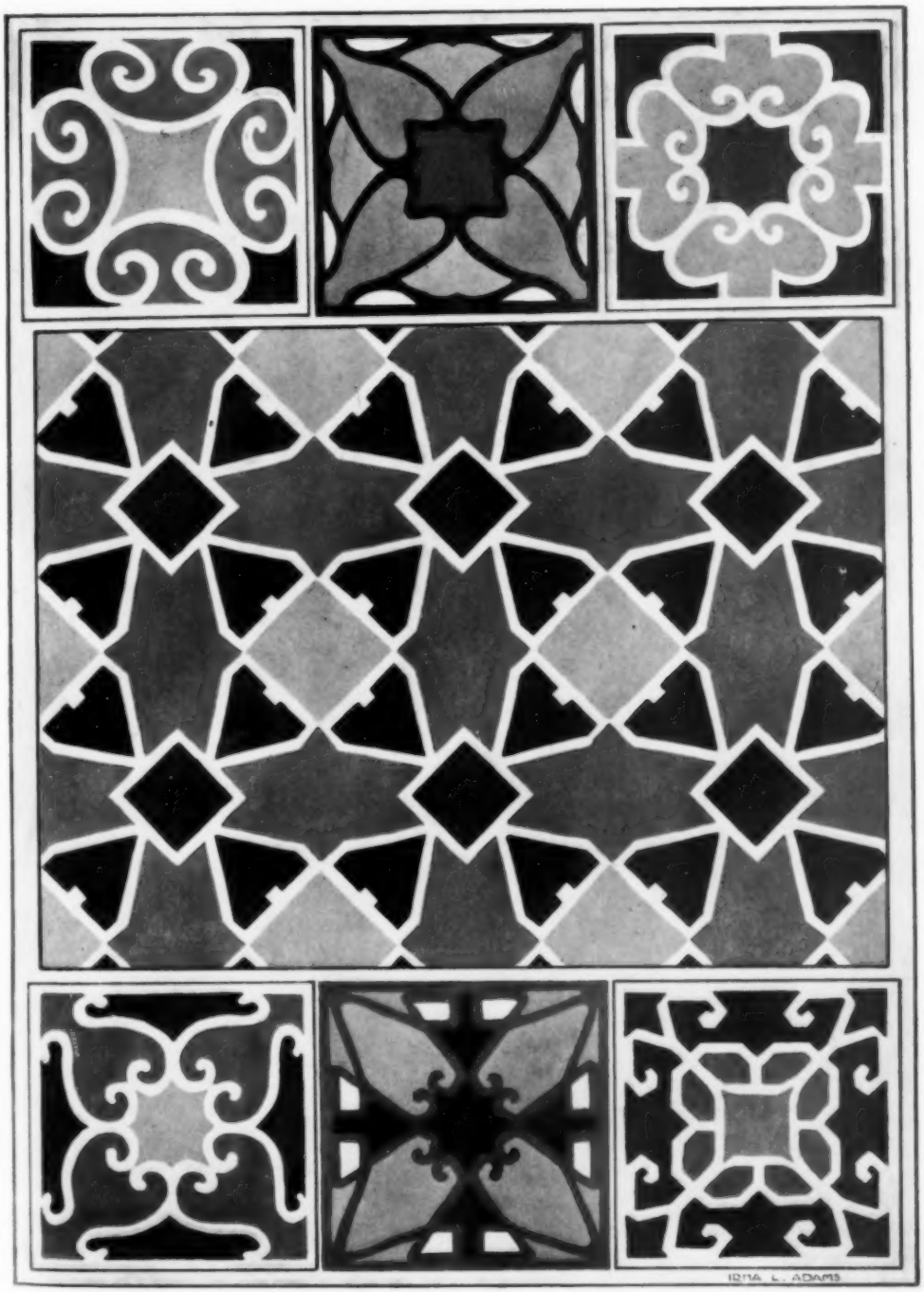
This work was tried out in two classes, one under my supervision and the other under my direct teaching, the results of which I am sending to your Good Ideas department."

Various stages in the rubber industry as shown in the posters are:—

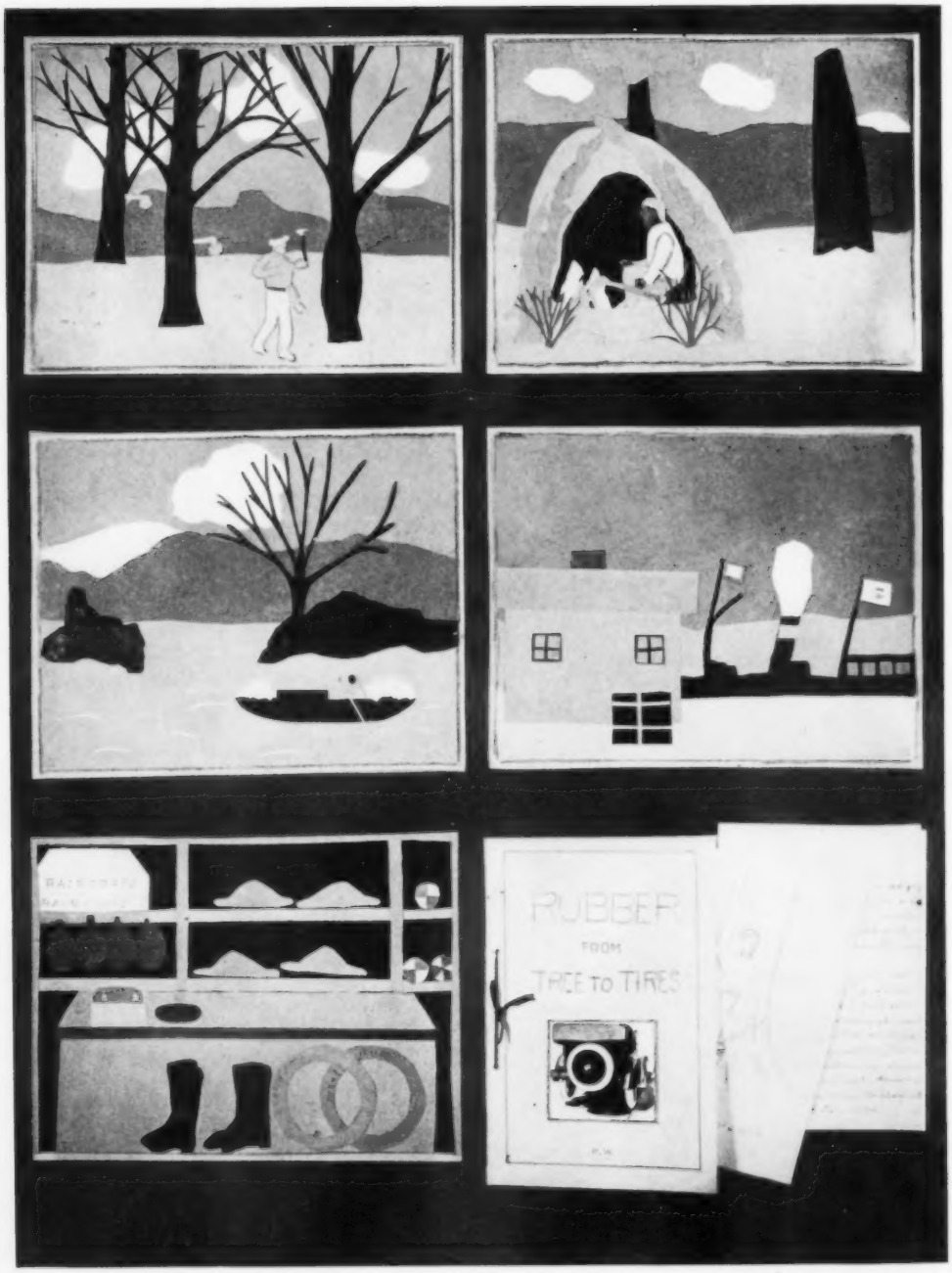
1. Tapping the rubber trees.
2. Smoking the rubber sap.
3. Bringing the rubber hams down the river to the seaport.
4. Shipping rubber to the United States.
5. The Rubber Store.



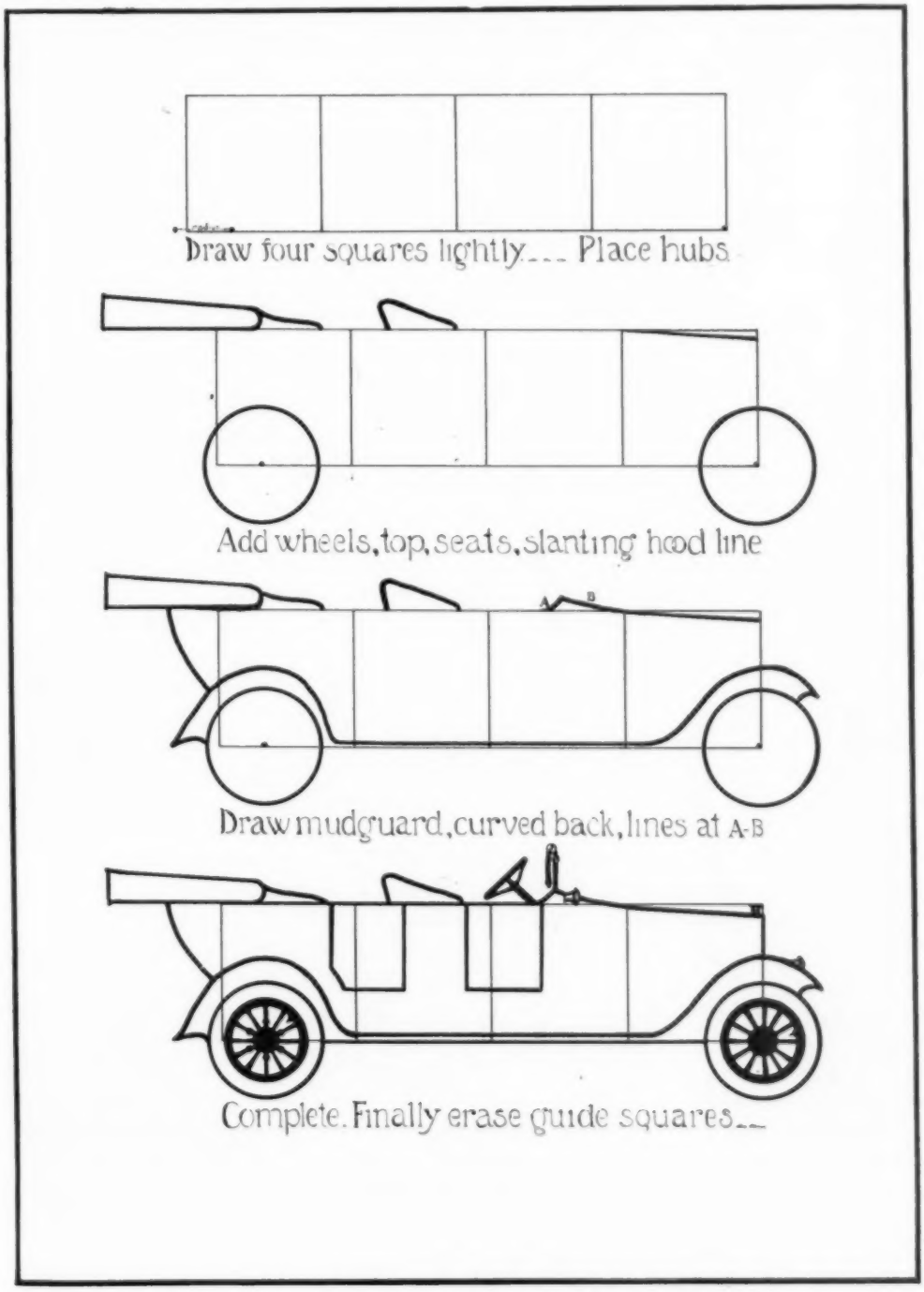
A PAPER PROBLEM BY ANNA H. CROFTS, NORTH ADAMS, MASSACHUSETTS



LINOLEUM DESIGNS DEVELOPED FROM NUMBERS AND FIGURES. THIS UNIQUE DESIGN SOURCE IS EXPLAINED BY MISS ADAMS ON PAGE XI



THE STORY OF RUBBER ILLUSTRATED BY CUT OUT PICTURES MADE BY THE PUPILS OF THE BUFFALO PUBLIC SCHOOLS UNDER THE DIRECTION OF ELIZABETH M. YATES


Draw four squares lightly... Place hubs
Add wheels, top, seats, slanting hood line
A
B
Draw mudguard, curved back, lines at A-B
Complete. Finally erase guide squares...

AUTOMOBILE DRAWING ILLUSTRATED IN FOUR SIMPLIFIED STEPS
BY MISS GEORGE ELEANOR SHAW OF CHICOPEE, MASSACHUSETTS

ILLUSTRATION 2 BUSY WEEK PICTURE

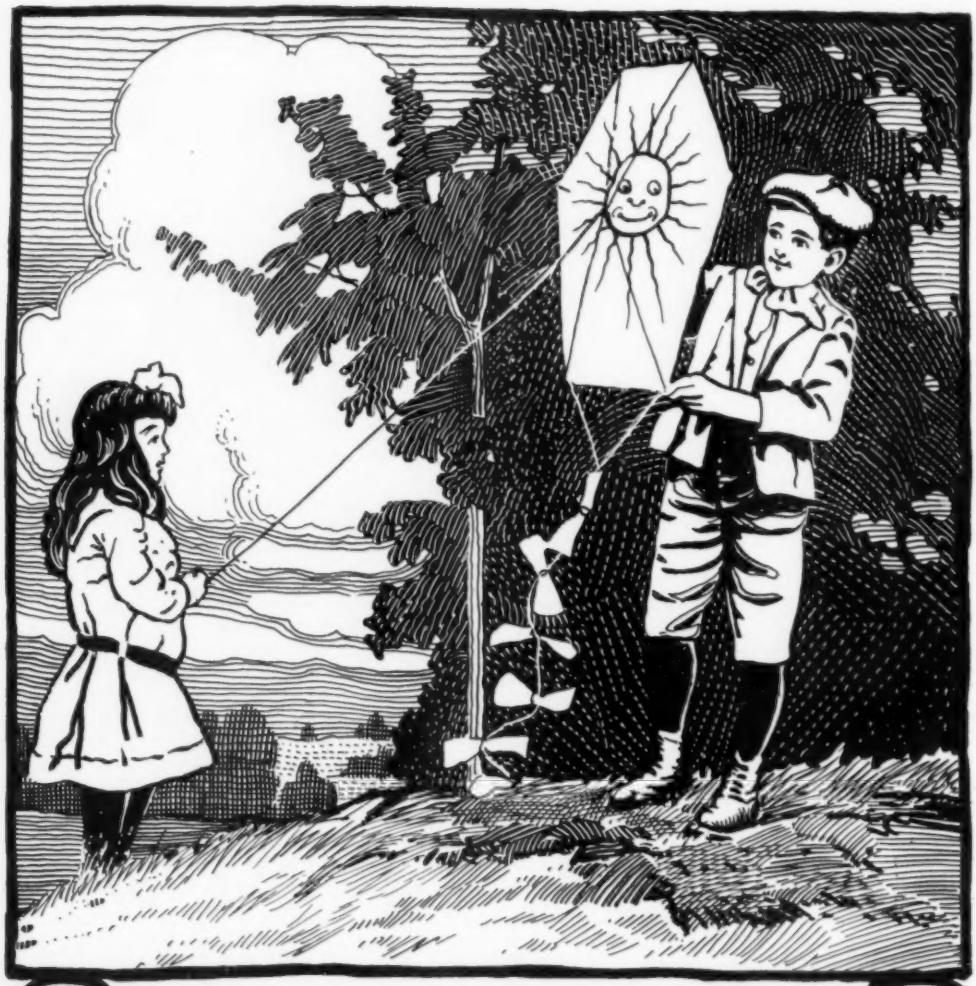
ON SATURDAY SOMETHING OR OTHER

THE SIXTH BUSY WEEK PICTURE BY MISS D. G. RICE

ILLUSTRATION 2 BUSY WEEK PICTURE

ON SUNDAY I SAY: "LIE STILL!
I'M GOING TO CHURCH WITH MOTHER"

THE LAST BUSY WEEK PICTURE BY MISS D. G. RICE



March

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6	7	8	9	10	11	12
13	14	15	16	17	18	19
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27	28	29	30	31		

KITE FLYING

The northwind blows the leaves about,
Sends shutters all a-banging
While overhead a fierce, gray cloud,
With angry look is hanging.

The fellows bring their kites outdoors,
While loud the gale is roaring.
And watch them quickly rise on high,
With dangling tails a-soaring.

Above the hemlock grove they fly,
And then accross the hollow.
They look so small we crane our necks,
And strain our eyes to follow.